

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: September 9, 2003, 22:13:29 ; Search time 85 Seconds  
(without alignments)  
179.268 Million cell updates/sec

Title: US-09-474-980B-221

Perfect score: 529

Sequence: 1 ALSGPCQLWLSLTSVLEGL.....DRHWQRPLQLSAAACGGG 96

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1107863 seqs, 158726573 residues

al number of hits satisfying chosen parameters: 1107863

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A\_Geneseq\_19Jun03.\*

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24: /SIDSI/gcgdata/geneseq/geneseq-emb1/AA2003.DAT.*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	529	100.0	96	AA16731	Human persephin pr
2	529	100.0	156	AA16727	Human pre-pro pers
3	529	100.0	156	AA162038	Human glial cell d
4	529	100.0	156	ABBB2392	Human persephin po
5	529	100.0	156	ABJ15130	Neublastin related
6	504	95.3	91	AA16732	WO9914235 Seq ID N
7	492	93.0	89	AA16733	Human persephin pr
8	492	93.0	89	AA60964	Human persephin.
9	492	93.0	89	AAU03924	Human substituted

10	490	92.6	96	AAU03951	Human PAP-F2ac ful
11	471.5	89.1	97	AAU03950	Human PNP-F2ac ful
12	460.5	87.1	97	AAU03949	Human PGP-F2ac ful
13	453	85.6	89	AAU03948	Human PAP-F2ac pol
14	439	83.0	96	AAW30066	Mouse mouse perse
15	439	83.0	96	AA16723	Mouse mature perse
16	439	83.0	96	AA16662	WO9914235 Seq ID N
17	439	83.0	96	AAU03955	Mouse persephin po
18	439	83.0	134	AAW30067	Mouse persephin.
19	439	83.0	134	AAW30067	WO9914235 Seq ID N
20	439	83.0	142	AA16681	WO9914235 Seq ID N
21	439	83.0	156	AA16721	Mouse pre-pro per
22	439	83.0	185	AAW26680	Mature mouse perse
23	439	83.0	185	AA16692	WO9914235 Seq ID N
24	434.5	82.1	90	AAU03947	Human PNP-F2ac pol
25	433	81.9	96	AA16726	WO9914235 Seq ID N
26	433	81.9	156	AA16724	Rat mature perseph
27	433	81.9	185	AAW26681	Mature rat perseph
28	433	81.9	185	AA16694	WO9914235 Seq ID N
29	430	81.3	110	AAU04453	Murine mutant P-hf
30	425	80.3	91	AAU16668	Human PGP-F2ac pol
31	423.5	80.1	90	AAU03946	Mature rat perseph
32	423	80.0	91	AAW30068	Rat persephin prot
33	423	80.0	91	AA16665	Mature mouse perse
34	413	78.1	89	AAW30064	Murine persephin s
35	413	78.1	89	AA16661	Murine substituted
36	413	78.1	89	AAU03925	Mature rat perseph
37	411	77.7	89	AAW30065	Rat persephin prot
38	411	77.7	89	AA16664	Rat substituted pe
39	411	77.7	89	AAU03926	Murine His-FLAG-PA
40	393	74.3	108	AAU03938	Murine PAP-F2ac po
41	388	73.3	89	AAU03939	Murine His-FLAG-PN
42	379.5	71.7	109	AAU03936	Murine PNP-F2ac po
43	374.5	70.8	90	AAU03937	Murine His-FLAG-PG
44	364.5	68.9	109	AAU03934	Persephin-neurturi
45	363.5	68.7	96	AAW30075	

#### ALIGNMENTS

RESULT 1  
AA16731  
ID AA16731 standard; Peptide: 96 AA.

XX AC AA16731;

XX DT 17-AUG-1999 (first entry)

XX DE Human persephin protein.

XX OS Homo sapiens.

XX PN WO9914235-Al.

XX PD 25-MAR-1999.

XX PF 15-SEP-1998; 98WO-US19163.

XX PR 16-SEP-1997; 97US-0931858.

XX PA (UNIW ) UNIV WASHINGTON.

XX PI Desauvage F, Johnson EM, Klein R, Kotzbauer PT;

XX PI Lampe PA, Milbrandt JD;

XX

Growth factor; GF; persephin; neuron growth; cellular degeneration;  
peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke;  
Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma;  
brain injury; spinal cord injury; nervous system tumour; infection;  
multiple sclerosis; cardiac muscle degeneration; injury; neurotoxin;  
metabolic disease; diabetes; renal dysfunction; neurturin.

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DR WPI; 1999-244023/20.
XX
PT New isolated persephin growth factor nucleic acids used to, e.g.
PT promote neuronal growth
XX
PS Claim 3; Page 205-206; 222pp; English.
XX
CC The invention relates to a novel isolated and purified growth factor (GF)
CC that comprises persephin or a fragment or a conservatively substituted
CC variant. The persephin GF polypeptides can promote the survival and
CC growth of neurons and non-neuronal cells. The persephin GF polypeptides
CC or polynucleotides can be used for preventing or treating cellular
CC degeneration or insufficiency, e.g. neuronal degeneration resulting from
CC peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's
CC disease, Parkinson's disease, Huntington's disease, ischemic stroke,
CC acute brain injury, acute spinal cord injury, nervous system tumours,
CC multiple sclerosis, or infection, hematopoietic cell degeneration or
CC insufficiency resulting from eosinopenia, anemias, thrombocytopenia, or
CC stem-cell insufficiencies, cardiac muscle degeneration or insufficiency
CC resulting from cardiomyopathy or congestive heart failure. They can also
CC be used for treating e.g. peripheral nerve trauma or injury, exposure to
CC and damage caused by infectious agents. The GF can also be used for
CC promoting the growth and/or differentiation of a cell in a culture
CC medium. The antisense polynucleotides can be used for treating a disease
CC condition mediated by expression of persephin by a population of cells.
CC The products can also be used for detection and diagnosis.
XX
SQ Sequence 96 AA;
Query Match 100.0%; Score 529; DB 20; Length 96;
Best Local Similarity 100.0%; Pred. No. 5,2e-55;
Matches 96; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 ALSGPCQLWSLTSVAELGLGYASEKVFIRYCAGSCPRGARTQHGIALARLQGGQRAHG 60
Db 1 ALSGPCQLWSLTSVAELGLGYASEKVFIRYCAGSCPRGARTQHGIALARLQGGQRAHG 60
QY 61 GPCCRTRYTDVAFDDRRHWRLPQLSAACGCGG 96
Db 61 GPCCRTRYTDVAFDDRRHWRLPQLSAACGCGG 96
RESULT 2
AAV16727
ID AAY16727 standard; Peptide; 156 AA.
XX
AC AAY16727;
17-AUG-1999 (first entry)
DE Human pre-pro persephin.
XX
KW Growth factor; GF; persephin; neuron growth; cellular degeneration;
KW peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke;
KW Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma;
KW brain injury; spinal cord injury; nervous system tumour; infection;
KW multiple sclerosis; cardiac muscle degeneration; injury; neurotoxin;
KW metabolic disease; diabetes; renal dysfunction; neurturin.
XX
OS Homo sapiens.
XX
PN W09914235-A1.
XX
PD 25-MAR-1999.
XX
PF 15-SEP-1998; 98WO-0519163.
XX
PR 16-SEP-1997; 97US-0931858.
XX
PA (UNIW ) UNIV WASHINGTON.
PI Desauvage F, Johnson EM, Klein R, Kotzbauer PT;

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PI Lampe PA, Milbrandt JD;
XX
DR WPI; 1999-244023/20.
DR N-PSDB; AAX60507.
XX
PT New isolated persephin growth factor nucleic acids used to, e.g.
PT promote neuronal growth
XX
PS Claim 5a; Page 204; 222pp; English.
XX
CC The invention relates to a novel isolated and purified growth factor (GF)
CC that comprises persephin or a fragment or a conservatively substituted
CC variant. The persephin GF polypeptides can promote the survival and
CC growth of neurons and non-neuronal cells. The persephin GF polypeptides
CC or polynucleotides can be used for preventing or treating cellular
CC degeneration or insufficiency, e.g. neuronal degeneration resulting from
CC peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's
CC disease, Parkinson's disease, Huntington's disease, ischemic stroke,
CC acute brain injury, acute spinal cord injury, nervous system tumours,
CC multiple sclerosis, or infection, hematopoietic cell degeneration or
CC insufficiency resulting from eosinopenia, anemias, thrombocytopenia, or
CC stem-cell insufficiencies, cardiac muscle degeneration or insufficiency
CC resulting from cardiomyopathy or congestive heart failure. They can also
CC be used for treating e.g. peripheral nerve trauma or injury, exposure to
CC neurotoxins, metabolic diseases such as diabetes or renal dysfunctions
CC and damage caused by infectious agents. The GF can also be used for
CC promoting the growth and/or differentiation of a cell in a culture
CC medium. The antisense polynucleotides can be used for treating a disease
CC condition mediated by expression of persephin by a population of cells.
CC The products can also be used for detection and diagnosis.
XX
SQ Sequence 156 AA;
Query Match 100.0%; Score 529; DB 20; Length 156;
Best Local Similarity 100.0%; Pred. No. 9e-55;
Matches 96; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 ALSGPCQLWSLTSVAELGLGYASEKVFIRYCAGSCPRGARTQHGIALARLQGGQRAHG 60
Db 61 ALSGPCQLWSLTSVAELGLGYASEKVFIRYCAGSCPRGARTQHGIALARLQGGQRAHG 120
QY 61 GPCCRTRYTDVAFDDRRHWRLPQLSAACGCGG 96
Db 121 GPCCRTRYTDVAFDDRRHWRLPQLSAACGCGG 156
RESULT 3
AAV92038
ID AAY92038 standard; Protein; 156 AA.
XX
AC AAY92038;
19-JUL-2000 (first entry)
DE Human glial cell derived factor (GDNF), Persephin subunit.
XX
KW human glial cell derived factor; GDNF; Persephin; CKGF; mutant;
KW cysteine knot growth factor; hairpin loop; infertility.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Misc-difference 1..69 /note= "optionally mutated to increase electrostatic
FT interaction between beta hairpin structure and
FT a receptor"
FT Domain 70..89 /label= beta_hairpin_loop_1
FT /note= "mutant optionally comprises one or more
FT substitutions in these residues"
FT Misc-difference 90..127 /note= "optionally mutated to increase electrostatic
FT interaction between beta hairpin structure and

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XX	NBN; neuropathy; pain; neublastin; analgesic; vaccine; gene therapy;
KW	human; GDNF; persephin.
XX	Homo sapiens.
OS	WO200278730-A2.
PN	10-OCT-2002.
PD	28-FEB-2002; 2002WO-US06388.
PF	28-MAR-2001; 2001US-287554P.
XX	28-MAR-2001; 2001US-0820421.
PR	(BIOJ ) BIOGEN INC.
XX	Sah DWY;
PI	WPI; 2002-740922/80.
DR	Treating neuropathic pain in a subject comprises administering a
XX	formulation comprising a neublastin polypeptide -
PT	Disclosure; Page 6-7; 69pp; English.
XX	The invention relates to treating neuropathic pain in a subject and
CC	involves administering a formulation comprising a neublastin (NBN)
CC	polypeptide. The method is useful for treating, preventing or delaying
CC	neuropathic pain. The present sequence represents a human persephin
CC	polypeptide, a GDNF (glial cell line-derived neurotrophic factor ligand)
CC	subfamily member.
XX	Sequence 156 AA;
SQ	
	Query Match 100.0%; Score 529; DB 23; Length 156;
	Best Local Similarity 100.0%; Pred. No. 9e-55;
	Matches 96; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy	1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLOGGRAGH 60
Dd	61 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLALARLOGGRAGH 120
Qy	61 GPCCRPRTRYTDVAFLLDDRHWRLPOLSAACGGG 96
Dd	121 GPCCRPRTRYTDVAFLLDDRHWRLPOLSAACGGG 156
	RESULT 5
ID	ABJ15130
ID	ABJ15130 standard; Protein; 156 AA.
AC	ABJ15130;
DT	19-DEC-2002 (first entry)
DE	Neublastin related persephin protein SEQ ID NO 50.
KW	Nootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic;
KW	tranquilliser; antidiabetic; ophthalmological; neurodegenerative disorder;
KW	neublastin; ischemic neuronal damage; traumatic brain injury; diabetes;
KW	peripheral neuropathy; neuropathic pain; Alzheimer's disease; glaucoma;
KW	Huntington's disease; Parkinson's disease; amyotrophic lateral sclerosis;
KW	memory impairment; renal disease.
OS	Homo sapiens.
XX	WO200272826-A2.
PN	19-SEP-2002.
PD	12-MAR-2002; 2002WO-EP02691.
PF	
XX	

PR 12-MAR-2001; 2001US-0804615.  
 XX (BIOJ ) BIOGEN INC.  
 PA (NSGE-) NS GENE AS.  
 XX  
 XX Sah DWY, Johansen TE, Rossomando A;  
 PI WPI; 2002-713515/77.  
 XX  
 XX New truncated neublastin polypeptides lacking one or more  
 PT amino-terminal amino acids of a mature neublastin polypeptide useful  
 PT for treating neurodegenerative disorders, e.g. peripheral neuropathy,  
 PT neuropathic pain, brain injury -  
 XX  
 XX Example 4; Page 55; 138pp; English.  
 PS  
 XX The invention relates to a truncated neublastin polypeptide comprising an  
 CC amino acid terminus that lacks one or more amino-terminal amino acids of  
 CC a mature neublastin polypeptide. The polypeptides and nucleic acids are  
 CC useful for treating neurodegenerative disorders such as ischemic neuronal  
 CC damage, traumatic brain injury, peripheral neuropathy, neuropathic pain,  
 CC Alzheimer's disease, Huntington's disease, Parkinson's disease, renal  
 CC amyotrophic lateral sclerosis, memory impairment, diabetes, renal  
 CC diseases, or glaucoma by moderating metabolism, growth, differentiation  
 CC or survival of a nerve or neuronal cell. This sequence is a neublastin  
 CC related protein of the invention.  
 XX  
 XX Sequence 156 AA;  
 SQ

Query Match 100.0%; Score 529; DB 23; Length 156;  
 Best Local Similarity 100.0%; Pred. No. 9e-55; Indels 0; Gaps 0;  
 Matches 96; Conservative 0; Mismatches 0

QY 1 ALSGPQLSLTSLVAELGLGYASEEKVIFRYCAGSCPRGARTQHGGLARLQGGQRAHG 60  
 DB 61 ALSGPQLSLTSLVAELGLGYASEEKVIFRYCAGSCPRGARTQHGGLARLQGGQRAHG 120  
 QY 61 GPCCRPTRYTDVAFLLDRHRWQRLPOLSAACGCGG 96  
 DB 121 GPCCRPTRYTDVAFLLDRHRWQRLPOLSAACGCGG 156

RESULT 6  
 AAY16732  
 ID AAY16732 standard; Peptide; 91 AA.  
 XX  
 AC AAY16732;  
 XX  
 17-AUG-1999 (first entry)  
 WO9914235 Seq ID No: 221.

XX Growth factor; GF; persephin; neuron growth; cellular degeneration;  
 KW peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke;  
 KW Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma;  
 KW brain injury; spinal cord injury; nervous system tumour; infection;  
 KW multiple sclerosis; cardiac muscle degeneration; injury; neurotoxin;  
 KW metabolic disease; diabetes; renal dysfunction; neurturin.  
 XX  
 OS Unidentified.  
 XX  
 XX WO9914235-A1.  
 PN  
 XX 25-MAR-1999.  
 PD  
 XX 15-SEP-1998; 98WO-US19163.  
 XX  
 XX 16-SEP-1997; 97US-0931858.  
 PR  
 XX (UNIW ) UNIV WASHINGTON.  
 PA  
 XX Desauvage F, Johnson EM, Klein R, Kottbauer PT,  
 PI Lampe PA, Milbrandt JD;

XX WPI; 1999-244023/20.  
 XX  
 XX New isolated persephin growth factor nucleic acids used to, e.g.  
 PT promote neuronal growth  
 XX  
 XX Disclosure; Page 206; 222pp; English.  
 XX  
 XX The invention relates to a novel isolated and purified growth factor (GF)  
 CC that comprises persephin or a fragment or a conservatively substituted  
 CC variant. The persephin GF polypeptides can promote the survival and  
 CC growth of neurons and non-neuronal cells. The persephin GF polypeptides  
 CC or polynucleotides can be used for preventing or treating cellular  
 CC degeneration or insufficiency, e.g. neuronal degeneration resulting from  
 CC peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's  
 CC disease, Parkinson's disease, Huntington's disease, ischemic stroke,  
 CC acute brain injury, acute spinal cord injury, nervous system tumours,  
 CC multiple sclerosis, or infection, hematopoietic cell degeneration or  
 CC insufficiency resulting from eosinopenia, anemias, thrombocytopenia, or  
 CC stem-cell insufficiencies, cardiac muscle degeneration or insufficiency  
 CC resulting from cardiomyopathy or congestive heart failure. They can also  
 CC be used for treating e.g. peripheral nerve trauma or injury, exposure to  
 CC neurotoxins, metabolic diseases such as diabetes or renal dysfunctions  
 CC and damage caused by infectious agents. The GF can also be used for  
 CC promoting the growth and/or differentiation of a cell in a culture  
 CC medium. The antisense polynucleotides can be used for treating a disease  
 CC condition mediated by expression of persephin by a population of cells.  
 CC The products can also be used for detection and diagnosis.  
 XX  
 XX Sequence 91 AA;  
 SQ

Query Match 95.3%; Score 504; DB 20; Length 91;  
 Best Local Similarity 100.0%; Pred. No. 4.5e-52; Indels 0; Gaps 0;  
 Matches 91; Conservative 0; Mismatches 0

QY 6 COLWSLTSLVAELGLGYASEEKVIFRYCAGSCPRGARTQHGGLARLQGGQRAHGPPCCR 65  
 DB 1 COLWSLTSLVAELGLGYASEEKVIFRYCAGSCPRGARTQHGGLARLQGGQRAHGPPCCR 60  
 QY 66 PTRYTDVAFLLDRHRWQRLPOLSAACGCGG 96  
 DB 61 PTRYTDVAFLLDRHRWQRLPOLSAACGCGG 91

RESULT 7  
 AAY16733  
 ID AAY16733 standard; Peptide; 89 AA.  
 XX  
 AC AAY16733;  
 XX  
 17-AUG-1999 (first entry)  
 DE Human persephin protein.

XX Growth factor; GF; persephin; neuron growth; cellular degeneration;  
 KW peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke;  
 KW Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma;  
 KW brain injury; spinal cord injury; nervous system tumour; infection;  
 KW multiple sclerosis; cardiac muscle degeneration; injury; neurotoxin;  
 KW metabolic disease; diabetes; renal dysfunction; neurturin.  
 XX  
 OS Homo sapiens.  
 XX  
 XX WO9914235-A1.  
 PN  
 XX 25-MAR-1999.  
 PD  
 XX 15-SEP-1998; 98WO-US19163.  
 XX  
 XX 16-SEP-1997; 97US-0931858.  
 PR  
 XX (UNIW ) UNIV WASHINGTON.  
 PA  
 XX

PI Desauvage F, Johnson EM, Klein R, Kotzbauer PT;  
 XX Lampe PA, Milbrandt JD;

XX WPI: 1999-244023/20.

XX New isolated persephin growth factor nucleic acids used to, e.g.  
 PT promote neuronal growth

XX Claim 2; Page 206-207; 222pp; English.

XX The invention relates to a novel isolated and purified growth factor (GF)  
 CC that comprises persephin or a fragment or a conservatively substituted  
 CC variant. The persephin GF polypeptides can promote the survival and  
 CC growth of neurons and non-neuronal cells. The persephin GF polypeptides  
 CC or polynucleotides can be used for preventing or treating cellular  
 CC degeneration or insufficiency, e.g. neuronal degeneration resulting from  
 CC peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's  
 CC disease, Parkinson's disease, Huntington's disease, ischemic stroke,  
 CC acute brain injury, acute spinal cord injury, nervous system tumours,  
 CC multiple sclerosis, or infection, hematopoietic cell degeneration or  
 CC insufficiency resulting from eosinopenia, anemias, thrombocytopaenia, or  
 CC stem-cell insufficiencies, cardiac muscle degeneration or insufficiency  
 CC resulting from cardiomyopathy or congestive heart failure. They can also  
 CC be used for treating e.g. peripheral nerve trauma or injury, exposure to  
 CC neurotoxins, metabolic diseases such as diabetes or renal dysfunctions  
 CC and damage caused by infectious agents. The GF can also be used for  
 CC promoting the growth and/or differentiation of a cell in a culture  
 CC medium. The antisense polynucleotides can be used for treating a disease  
 CC condition mediated by expression of persephin by a population of cells.  
 CC The products can also be used for detection and diagnosis.

SQ Sequence 89 AA;

Query Match 93.0%; Score 492; DB 20; Length 89;  
 Best Local Similarity 100.0%; Pred. No. 1.2e-50;  
 Matches 89; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 6 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLARLQGGRAHGGPCR 65  
 DB 1 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLARLQGGRAHGGPCR 60

OY 66 PTRYDVAFLDDRHRWQLPQLSAAACGC 94

DB 61 PTRYDVAFLDDRHRWQLPQLSAAACGC 89

RESULT 8  
 AB60964

AB60964 standard; Protein; 89 AA.

AC AAB60964;

XX 10-DEC-2001 (first entry)

DE Human persephin.

XX Human; glial cell line-derived growth factor; GDNF; corneal defect;  
 KW epidermal healing; wound healing; wound healing disorder; scarring;  
 KW gene therapy; neurturin; persephin; artemin.

OS Homo sapiens.

XX WO200130375-A2.

XX 03-MAY-2001.

XX 30-OCT-2000; 2000WO-EP10674.

XX 29-OCT-1999; 99EP-0121597.

XX (BIOP-) BIOPHARM GES BIOTECHNOLOGISCHEN ENTWICKL.

PI Hanke M, Kruse F, Paulista M, Pohl J;

XX WPI: 2001-316290/33.

XX Use of glial cell line-derived growth factor for epidermal and stromal  
 PT wound healing, and treating wound healing or scarring disorders,  
 PT particularly for treating corneal defects

XX Disclosure; Fig 1; 60pp; English.

XX The present invention describes the use of glial cell line-derived growth  
 CC factor (GDNF) or a derivative in the manufacture of pharmaceutical  
 CC compositions for epidermal and wound healing, the treatment of epidermal  
 CC and stromal wound healing disorders and scarring disorders. In  
 CC particular, they are useful for treating corneal defects. Alternatives to  
 CC GDNF are neurturin, persephin and artemin. The present sequence is the  
 CC human persephin protein.

SQ Sequence 89 AA;

Query Match 93.0%; Score 492; DB 22; Length 89;  
 Best Local Similarity 100.0%; Pred. No. 1.2e-50;  
 Matches 89; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 6 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLARLQGGRAHGGPCR 65

DB 1 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLARLQGGRAHGGPCR 60

OY 66 PTRYDVAFLDDRHRWQLPQLSAAACGC 94

DB 61 PTRYDVAFLDDRHRWQLPQLSAAACGC 89

RESULT 9  
 AAU03924

ID AAU03924 standard; Protein; 89 AA.

XX AC AAU03924;

XX 23-OCT-2001 (first entry)

XX Human substituted persephin polypeptide.

XX Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS;  
 KW growth factor receptor alpha-Ret protein tyrosine kinase; GFRalpha1-RET;  
 KW trophic support; peripheral neuropathy; amyotrophic lateral sclerosis;  
 KW Alzheimer's disease; Parkinson's disease; Huntington's disease; diabetes;  
 KW acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury;  
 KW acute spinal cord injury; multiple sclerosis; nervous system tumour;  
 KW neuroblastoma; enteric disease; idiopathic constipation; eosinopenia;  
 KW basopenia; lymphopenia; monocytopenia; neutropenia; anaemia;  
 KW cardiac muscle degeneration; congestive heart failure; thrombocytopaenia.

OS Homo sapiens.

XX WO200147946-A2.

XX 05-JUL-2001.

XX 21-DEC-2000; 2000WO-US34852.

XX 28-DEC-1999; 99US-0473551.

XX (UNIW ) UNIV WASHINGTON.

XX Milbrandt JD, Baloh RH;

XX WPI: 2001-425618/45.

XX New growth factor that activates growth factor receptor alpha1-Ret  
 PT protein-tyrosine kinase, for providing trophic support to a mammalian  
 PT cell and producing differentiation of a mammalian cell in a patient -  
 XX Claim 4; Page 45; 73pp; English.

XX The sequence represents a human persephin protein, which can have  
 CC substituted residues in its F2a and/or F2c regions. The substitutions are  
 CC from the F2a and F2c regions of the proteins GDNF, neurturin and artemin,  
 CC from humans, mice or rats. This type of protein activates the growth  
 CC factor receptor alpha1-Ret protein-tyrosine kinase (GFRalpha1-RET), but  
 CC does not substantially activate GFRalpha2-RET or GFRalpha3-RET. The  
 CC growth factors and nucleic acids encoding them are useful for providing  
 CC trophic support to a mammalian cell and/or for producing differentiation  
 CC of a mammalian cell, in a patient suffering from peripheral neuropathy,  
 CC anyotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease,  
 CC Huntington's disease, diabetes, acute brain injury, acute spinal cord injury,  
 CC (AIDS), ischaemic stroke, acute brain injury, acute spinal cord injury,  
 CC multiple sclerosis, nervous system tumours (e.g. neuroblastomas), or  
 CC enteric diseases such as idiopathic constipation. The sequences are also  
 CC useful for preventing or treating cellular degeneration or insufficiency  
 CC in an individual, suffering from eosinopaenia, basopaenia, lymphopaenia,  
 CC monocytopenia, neutropenia, anaemia, thrombocytopaenia, cardiac muscle  
 CC degeneration, or congestive heart failure. The growth factors are also  
 CC useful for promoting the survival of peripheral and central neuronal  
 CC populations in vivo or in vitro.

Sequence 89 AA;

Query Match 93.0%; Score 492; DB 22; Length 89;  
 Best Local Similarity 100.0%; Pred. No. 1.2e-50;  
 Matches 89; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 6 CQLWSLTSLVAELGLGYASEEKVIFRYCAGSCPRGARTQHGIALARLQGGRAHGPCCR 65  
 DB 1 CQLWSLTSLVAELGLGYASEEKVIFRYCAGSCPRGARTQHGIALARLQGGRAHGPCCR 60  
 QY 66 PTRYTDVAFLLDRHWRQRLPQLSAAACGC 94  
 DB 61 PTRYTDVAFLLDRHWRQRLPQLSAAACGC 89

RESULT 10  
 AAU03951  
 ID AAU03951 standard; Protein: 96 AA.

XX AAU03951;

DT 23-OCT-2001 (first entry)

XX Human PAP-F2ac full-length polypeptide.

XX Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS;  
 KW growth factor receptor alpha1-Ret protein tyrosine kinase; GFRalpha1-RET;  
 KW trophic support; peripheral neuropathy; anyotrophic lateral sclerosis;  
 KW Alzheimer's disease; Parkinson's disease; Huntington's disease; diabetes;  
 KW acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury;  
 KW acute spinal cord injury; multiple sclerosis; nervous system tumour;  
 KW neuroblastoma; enteric disease; idiopathic constipation; eosinopaenia;  
 KW basopaenia; lymphopaenia; monocytopenia; neutropenia; anaemia;  
 KW cardiac muscle degeneration; congestive heart failure; thrombocytopaenia;  
 KW mutant; mutein.

XX Chimeric - Homo sapiens.

XX Key Location/Qualifiers  
 XX Region 68...72 "Human artemin F2a region"  
 FT /note= 82...88  
 FT /note= "Human artemin F2c region"

XX WO200147946-A2.

XX 05-JUL-2001.

XX 21-DEC-2000; 2000WO-US34852.

XX 28-DEC-1999; 99US-0473551.

XX (UNIW ) UNIV WASHINGTON.  
 PA Milbrandt JD, Baloh RH;  
 PI WPI; 2001-425618/45.  
 DR  
 XX New growth factor that activates growth factor receptor alpha1-Ret  
 PT protein-tyrosine kinase, for providing trophic support to a mammalian  
 PT cell and producing differentiation of a mammalian cell in a patient -  
 XX Claim 8; Page 48; 73pp; English.

XX The sequence represents a human persephin full-length protein, whereby  
 CC the F2a and F2c regions have amino acid substitutions from the F2a and  
 CC F2c regions of artemin protein. Persephin can have substitutions from  
 CC the F2a and F2c regions of the proteins GDNF, neurturin and artemin, from  
 CC humans, mice or rats. This type of protein activates the growth factor  
 CC receptor alpha1-Ret protein-tyrosine kinase (GFRalpha1-RET), but does not  
 CC substantially activate GFRalpha2-RET or GFRalpha3-RET. The growth factors  
 CC and nucleic acids encoding them are useful for providing trophic support  
 CC to a mammalian cell and/or for producing differentiation of a mammalian  
 CC cell, in a patient suffering from peripheral neuropathy, amyotrophic  
 CC lateral sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's  
 CC disease, diabetes, acquired immunodeficiency syndrome (AIDS), ischaemic  
 CC stroke, acute brain injury, acute spinal cord injury, multiple sclerosis,  
 CC nervous system tumours (e.g. neuroblastomas), or enteric diseases such as  
 CC idiopathic constipation. The sequences are also useful for preventing or  
 CC treating cellular degeneration or insufficiency in an individual,  
 CC suffering from eosinopaenia, basopaenia, lymphopaenia, monocytopenia,  
 CC neutropenia, anaemia, thrombocytopaenia, cardiac muscle degeneration, or  
 CC congestive heart failure. The growth factors are also useful for  
 CC promoting the survival of peripheral and central neuronal populations in  
 CC vivo or in vitro.

XX Sequence 96 AA;

Query Match 92.6%; Score 490; DB 22; Length 96;  
 Best Local Similarity 92.7%; Pred. No. 2.2e-50;  
 Matches 89; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY 1 ALSGPCQLWSLTSLVAELGLGYASEEKVIFRYCAGSCPRGARTQHGIALARLQGGRAHG 60  
 DB 1 ALSGPCQLWSLTSLVAELGLGYASEEKVIFRYCAGSCPRGARTQHGIALARLQGGRAHG 60

QY 61 GPCCRTRYTDVAFLLDRHWRQRLPQLSAAACGC 96  
 DB 61 GPCCRTRYTDVAFLLDRHWRQRLPQLSAAACGC 96

RESULT 11

AAU03950  
 ID AAU03950 standard; Protein: 97 AA.

XX AAU03950;

XX 23-OCT-2001 (first entry)

XX Human PNP-F2ac full-length polypeptide.

XX Persephin; F2a; F2c; GDNF; neurturin; artemin; human; mouse; rat; AIDS;  
 KW growth factor receptor alpha1-Ret protein tyrosine kinase; GFRalpha1-RET;  
 KW trophic support; peripheral neuropathy; anyotrophic lateral sclerosis;  
 KW Alzheimer's disease; Parkinson's disease; Huntington's disease; diabetes;  
 KW acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury;  
 KW acute spinal cord injury; multiple sclerosis; nervous system tumour;  
 KW neuroblastoma; enteric disease; idiopathic constipation; eosinopaenia;  
 KW basopaenia; lymphopaenia; monocytopenia; neutropenia; anaemia;  
 KW cardiac muscle degeneration; congestive heart failure; thrombocytopaenia;  
 KW mutant; mutein.

XX Chimeric - Homo sapiens.



DB 61 GPCRPTAFDDDDVAFDDDRHRHILKHSAAACGCG 97

RESULT 13  
AAU03948  
ID AAU03948 standard; Protein; 89 AA.  
XX  
AC AAU03948;  
XX  
DT 23-OCT-2001 (first entry)  
XX  
DE Human PAP-F2ac polypeptide.  
XX  
KW Persephin; F2a; F2c; GDNF; neurturin; human; mouse; rat; AIDS;  
KW growth factor receptor alpha1-RET protein tyrosine kinase; GFRA1phal-RET;  
KW trophic support; peripheral neuropathy; amyotrophic lateral sclerosis;  
KW Alzheimer's disease; Parkinson's disease; Huntington's disease; diabetes;  
KW acquired immunodeficiency syndrome; ischaemic stroke; acute brain injury;  
KW acute spinal cord injury; multiple sclerosis; nervous system tumour;  
KW neuroblastoma; enteric disease; idiopathic constipation; eosinopaenia;  
KW basopaenia; lymphopaenia; monocytopenia; neutropaenia; anaemia;  
KW cardiac muscle degeneration; congestive heart failure; thrombocytopaenia;  
mutant; mutein.

XX  
OS Chimeric - Homo sapiens.  
XX  
XX Key Location/Qualifiers  
FH Region 63..67  
FT /note= "Human artemin F2a region"  
FT Region 77..83  
FT /note= "Human artemin F2c region"  
XX  
XX WO200147946-A2.  
XX  
XX 05-JUL-2001.  
XX  
XX 21-DEC-2000; 2000WO-US34852.  
XX  
XX 28-DEC-1999; 99US-0473551.  
XX  
XX (UNIW ) UNIV WASHINGTON.  
XX  
XX Milbrandt JD, Baloh RH;  
XX  
XX WPI; 2001-425618/45.  
XX  
XX New growth factor that activates growth factor receptor alpha1-RET  
XX protein-tyrosine kinase, for providing trophic support to a mammalian  
XX cell and producing differentiation of a mammalian cell in a patient -  
XX  
XX Claim 7; Page 48; 73pp; English.  
XX  
XX The sequence represents a human persephin protein, whereby the F2a and  
XX F2c regions have amino acid substitutions from the F2a and F2c regions of  
XX artemin protein. Persephin can have substitutions from the F2a and F2c  
XX regions of the proteins GDNF, neurturin and artemin, from humans, mice or  
XX rats. This type of protein activates the growth factor receptor  
XX alpha1-RET protein-tyrosine kinase (GFRA1phal-RET), but does not  
XX substantially activate GFRA1phal2-RET or GFRA1phal3-RET. The growth factors  
XX and nucleic acids encoding them are useful for providing trophic support  
XX to a mammalian cell and/or for producing differentiation of a mammalian  
XX cell, in a patient suffering from peripheral neuropathy, amyotrophic  
XX lateral sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's  
XX disease, diabetes, acquired immunodeficiency syndrome (AIDS), ischaemic  
XX stroke, acute brain injury, acute spinal cord injury, multiple sclerosis,  
XX nervous system tumours (e.g. neuroblastomas), or enteric diseases such as  
XX idiopathic constipation. The sequences are also useful for preventing or  
XX treating cellular degeneration or insufficiency in an individual,  
XX suffering from eosinopaenia, basopaenia, lymphopaenia, monocytopenia,  
XX neutropaenia, anaemia, thrombocytopaenia, cardiac muscle degeneration, or  
XX congestive heart failure. The growth factors are also useful for  
XX promoting the survival of peripheral and central neuronal populations in  
XX vivo or in vitro.

XX  
SQ Sequence 89 AA;  
Query Match 85.6%; Score 453; DB 22; Length 89;  
Best Local Similarity 92.18; Pred. No. 5.1e-46;  
Matches 82; Conservative 3; Mismatches 4; Indels 0; Gaps 0;  
QY 6 COLWSLTLSVAELGLGYASEKVIIFYCAGSCPRGARTQHGGLARLQGGRAHGGPCCR 65  
DB 1 COLWSLTLSVAELGLGYASEKVIIFYCAGSCPRGARTQHGGLARLQGGRAHGGPCCR 60  
QY 66 PTRTDAFDDDRHRWQLPOLSAACGC 94  
DB 61 PTRTDAFDDDRHRWQLPOLSAACGC 89  
RESULT 14  
AAW30066  
ID AAW30066 standard; Protein; 96 AA.  
XX  
AC AAW30066;  
XX  
DT 27-MAR-1998 (first entry)  
XX  
DE Mature mouse persephin.  
XX  
XX Persephin; neurturin; glial-derived neurotrophic factor; GDNF;  
KW neuronal degeneration; haematopoietic cell degeneration;  
KW cardiac muscle degeneration; amyotrophic lateral sclerosis;  
KW neuropathy; Alzheimer's disease; Parkinson's disease; stroke;  
KW Huntington's disease; nervous system tumour; multiple sclerosis;  
KW eosinopenia; basopenia; lymphopenia; monocytopenia; neutropenia;  
KW anaemia; thrombocytopenia; stem cell insufficiency; cardiomyopathy;  
KW congestive heart failure; therapy; mouse.  
XX  
OS Mus musculus.  
XX  
XX Key Location/Qualifiers  
FH Misc-difference 10 /note= "O-glycosylated"  
FT Misc-difference 12 /note= "O-glycosylated"  
FT Misc-difference 24 /note= "O-glycosylated"  
FT Misc-difference 36 /note= "O-glycosylated"  
FT Misc-difference 43 /note= "O-glycosylated"  
FT Misc-difference 46 /note= "O-glycosylated"  
FT Misc-difference 67 /note= "O-glycosylated"  
FT Misc-difference 68 /note= "O-glycosylated"  
FT Misc-difference 73 /note= "O-glycosylated"  
FT Misc-difference 88 /note= "O-glycosylated"  
XX  
XX WO9733911-A1.  
XX  
XX 18-SEP-1997.  
XX  
XX 14-MAR-1997; 97WO-US03461.  
XX  
XX 14-MAR-1996; 96US-0615944.  
XX  
XX (UNIW ) UNIV WASHINGTON.  
XX  
XX Johnson EM, Kotzbauer PT, Lampe PA, Milbrandt JD;  
XX WPI; 1997-470818/43.  
XX  
XX N-PSDB; AAT90761.

XX GDNF-neurturin family related growth factor, Persephin - used to  
 PT prevent or treat cellular, neuronal or non-neuronal, degeneration or  
 PT insufficiency

XX Claim 3; Page 151; 228pp; English.

XX This polypeptide comprises mature mouse persephin, a novel growth  
 CC factor and member of the glial-derived neurotrophic factor-  
 CC neurturin family. Recombinant mature persephin can be expressed  
 CC in host cells utilising an isolated nucleic acid sequence (see  
 CC AAT90761). Persephin polypeptides, and DNA sequences encoding them,  
 CC can be used in claimed methods to prevent or treat cellular  
 CC degeneration or insufficiency, such as neuronal degeneration  
 CC resulting from peripheral neuropathy, amyotrophic lateral  
 CC sclerosis, Alzheimer's disease, Parkinson's disease, Huntington's  
 CC disease, ischemic stroke, acute brain or spinal cord injury,  
 CC nervous system tumours, multiple sclerosis and infection. The  
 CC cellular degeneration or insufficiency may also comprise  
 CC haematopoietic cell degeneration or insufficiency resulting from  
 CC eosinopenia, basopenia, lymphopenia, monocytopenia, neutropenia,  
 CC anaemia, thrombocytopenia or stem-cell insufficiencies. Also  
 CC included is cardiac muscle degeneration or insufficiency arising  
 CC from cardiomyopathy or congestive heart failure. Persephin can be  
 CC added to a cell culture medium to promote growth and/or  
 CC differentiation.

XX Sequence 96 AA;

Query Match 83.0%; Score 439; DB 18; Length 96;  
 Best Local Similarity 81.2%; Pred. No. 2.5e-44;  
 Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;  
 QY 1 ALSGPCQLWSLTSLVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLARLQGGRAHG 60  
 DB 1 ALAGSCLWSLTLPVAELGLGYASEEKVIFRYCAGSCPEARTQHSVLARLGRGRAHG 60  
 QY 61 GPCCRPTRYTDVAFLLDRHRWQRLPQLSAAACGCGG 96  
 DB 61 RPCCQPTSYADVTFLLDDQHHWQQLPQLSAAACGCGG 96

RESULT 15

AAV16723

ID AAV16723 standard; Peptide; 96 AA.

XX AAV16723;

17-AUG-1999 (first entry)

DE Mouse mature persephin protein.

XX Growth factor; GF; persephin; neuron growth; cellular degeneration;  
 KW peripheral neuropathy; amyotrophic lateral sclerosis; ischemic stroke;  
 KW Alzheimer's disease; Parkinson's disease; Huntington's disease; trauma;  
 KW brain injury; spinal cord injury; nervous system tumour; infection;  
 KW multiple sclerosis; cardiac muscle degeneration; injury; neurotoxin;  
 KW metabolic disease; diabetes; renal dysfunction; neurturin.

OS Mus sp.

XX W09914235-A1.

XX 25-MAR-1999.

XX 15-SEP-1998; 98WO-US19163.

XX 16-SEP-1997; 97US-0931858.

XX (UNITW ) UNIV WASHINGTON.

XX Desauvage F, Johnson EM, Klein R, Kotzbauer PT;  
 PI Lampe PA, Milbrandt JD;

XX

DR WPI; 1999-244023/20.

XX New isolated persephin growth factor nucleic acids used to, e.g.  
 PT promote neuronal growth

XX Claim 3; Page 193; 222pp; English.

XX The invention relates to a novel isolated and purified growth factor (GF)  
 CC that comprises persephin or a fragment or a conservatively substituted  
 CC variant. The persephin GF polypeptides can promote the survival and  
 CC growth of neurons and non-neuronal cells. The persephin GF polypeptides  
 CC or polynucleotides can be used for preventing or treating cellular  
 CC degeneration or insufficiency, e.g. neuronal degeneration resulting from  
 CC peripheral neuropathy, amyotrophic lateral sclerosis, Alzheimer's  
 CC disease, Parkinson's disease, Huntington's disease, ischemic stroke,  
 CC acute brain injury, acute spinal cord injury, nervous system tumours,  
 CC multiple sclerosis, or infection, hematopoietic cell degeneration or  
 CC insufficiency resulting from eosinopenia, anemias, thrombocytopenia, or  
 CC stem-cell insufficiencies, cardiac muscle degeneration or insufficiency  
 CC resulting from cardiomyopathy or congestive heart failure. They can also  
 CC be used for treating e.g. peripheral nerve trauma or injury, exposure to  
 CC neurotoxins, metabolic diseases such as diabetes or renal dysfunctions  
 CC and damage caused by infectious agents. The GF can also be used for  
 CC promoting the growth and/or differentiation of a cell in a culture  
 CC medium. The antisense polynucleotides can be used for treating a disease  
 CC condition mediated by expression of persephin by a population of cells.  
 CC The products can also be used for detection and diagnosis.

XX Sequence 96 AA;

Query Match 83.0%; Score 439; DB 20; Length 96;  
 Best Local Similarity 81.2%; Pred. No. 2.5e-44;  
 Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;  
 QY 1 ALSGPCQLWSLTSLVAELGLGYASEEKVIFRYCAGSCPRGARTQHGLARLQGGRAHG 60  
 DB 1 ALAGSCLWSLTLPVAELGLGYASEEKVIFRYCAGSCPEARTQHSVLARLGRGRAHG 60  
 QY 61 GPCCRPTRYTDVAFLLDRHRWQRLPQLSAAACGCGG 96  
 DB 61 RPCCQPTSYADVTFLLDDQHHWQQLPQLSAAACGCGG 96

Search completed: September 9, 2003, 22:22:28

Job time : 86 secs

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**A;Accession:** JC6518

RESULT 3

A37499

glial cell line-derived neurotrophic factor precursor - rat

N;Alternate names: GDNF

Species: glial cell line-derived neurotrophic factor splice form GDNF555; glial cell line-derived neurotrophic factor (Norway rat)

Date: 16-Feb-1994 #sequence\_revision 16-Feb-1994 #text\_change 05-Nov-1999

C:Accession: A37499; I67605; I53427; I58180; S61537

R:Lin, L.F.; Doherty, D.H.; Lille, J.D.; Bektesh, S.; Collins, F.

Science 260, 1130-1132, 1993

A:Title: GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic neurons

A:Reference number: A37499; MUID:93262463; PMID:8493557

A:Accession: A37499

A:Molecule type: mRNA; protein

A:Residues: 1-211 <LIN>

A:Cross-references: GB:I5305; NID:g310123; PIDN:AAA67909.1; PID:g310124

A:Experimental source: glial cell line B49

A:Note: sequence extracted from NCBI backbone (NCBIP:132083)

R:Springer, J.E.; Seeburger, J.L.; He, J.; Gabrea, A.; Blankenhorn, E.P.; Bergman, L.W. Exp. Neurol. 131, 47-52, 1995

A:Title: cDNA sequence and differential mRNA regulation of two forms of glial cell line-derived neurotrophic factor

A:Reference number: I53427; MUID:95203379; PMID:7895811

A:Accession: I67605

A>Status: preliminary; translated from GB/EMBL/DBJ

A:Molecule type: mRNA

A:Residues: 1-24, 'A', 52-76, 'S', 78-89, 'K', 91-211 <SPR1>

A:Cross-references: GB:S75585; NID:g912790; PIDN:RAB33892.1; PID:g912791

A:Experimental source: Long-Evan rats; splice form GDNF555

A:Accession: I53427

A>Status: preliminary; translated from GB/EMBL/DBJ

A:Molecule type: mRNA

A:Residues: 1-76, 'S', 78-89, 'K', 91-211 <SPR2>

A:Cross-references: GB:S75583; NID:g912788; PIDN:RAB33891.1; PID:g912789

A:Experimental source: strain uncertain; splice form GDNF633

Water-Crazzolara, C.; Unsicker, K. Neuroreport 5, 2486-2488, 1994

A:Title: GDNF is expressed in two forms in many tissues outside the CNS.

A:Reference number: I58180; MUID:95210610; PMID:7696586

A:Accession: I58180

A>Status: translated from GB/EMBL/DBJ

A:Molecule type: mRNA

A:Residues: 1-24, 'A', 52-76 <SUT>

A:Cross-references: EMBL:X92495; NID:g1045219; PIDN:CAA63237.1; PID:g1045220

A:Experimental source: strain wistar; kidney

C:Genetics:

A:Gene: gdnf

C:Keywords: disulfide bond; glycoprotein; homodimer

F:1-211/Product: glial cell line-derived neurotrophic factor splice form GDNF633 #status predicted

F:1-24, 'A', 52-211/Product: glial cell line-derived neurotrophic factor splice form GDNF555 #status predicted

F:1-19/Domain: signal sequence #status predicted <SIG>

F:20-77/Domain: propeptide #status predicted <PRO>

F:78-211/Product: glial cell line-derived neurotrophic factor #status experimental <MAT>

F:126,162/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 32.5%; Score 172; DB 2: Length 211;

Best Local Similarity 41.5%; Pred. No. 1.3e-11;

Matches 39; Conservative 15; Mismatches 34; Indels 6; Gaps 3;

GenCore version 5.1.6  
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OM protein - protein search, using sw model  
Run on: September 9, 2003, 22:14:04 ; Search time 23 Seconds  
(without alignments)  
196.285 Million cell updates/sec

Title: US-09-474-980B-221  
Perfect score: 529  
Sequence: 1 ALSGPCQLWSLTLSVRLGL.....DRHRWQLPOLSAACCGG 96

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 127863 seqs, 47026705 residues

al number of hits satisfying chosen parameters: 127863

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : SwissProt\_41.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	529	100.0	156	1 PSPN_HUMAN	O60542 homo sapien
2	439	83.0	156	1 PSPN_MOUSE	O70300 mus musculus
3	433	81.9	156	1 PSPN_RAT	O70301 rattus norv
4	219.5	41.5	197	1 NRTN_HUMAN	O99748 homo sapien
5	216.5	40.9	195	1 NRTN_MOUSE	P97463 mus musculus
6	173	32.7	211	1 GDNF_MOUSE	P48540 mus musculus
7	172	32.5	211	1 GDNF_RAT	O07731 rattus norv
8	169	31.9	211	1 GDNF_HUMAN	P39905 homo sapien
9	110.5	20.9	555	1 MIS_MOUSE	P27106 mus musculus
10	108.5	20.5	575	1 MIS_BOVIN	O03972 bos taurus
11	105.5	19.3	575	1 MIS_PIG	P79295 sus scrofa
12	104.5	19.8	560	1 MIS_HUMAN	P03971 homo sapien
13	101	19.1	553	1 MIS_RAT	P49000 rattus norv
14	100.5	19.0	303	1 GDFE_RAT	O92016 rattus norv
15	94.5	17.9	303	1 GDFE_MOUSE	O92017 mus musculus
16	94	17.8	946	1 IHB_MOUSE	O61643 drosophila
17	86.5	16.4	405	1 GDFE_MOUSE	O92144 mus musculus
18	86.5	16.4	407	1 GDFE_HUMAN	O95390 homo sapien
19	84.5	16.0	375	1 GDFE_PAPHA	O18828 papio hamad
20	82	15.5	395	1 UNIV_STRPU	P48970 stronglyloce
21	81.5	15.4	255	1 IHB_MOUSE	O04999 mus musculus
22	81.5	15.4	374	1 GDFE_BRARE	O42222 brachydanio
23	81	15.3	352	1 IHB_MOUSE	P55103 homo sapien
24	80.5	15.2	349	1 IHB_MOUSE	O04088 sus scrofa
25	80.5	15.2	375	1 GDFE_BOVIN	O18836 bos taurus
26	80.5	15.2	375	1 GDFE_CHICK	O42220 gallus gall
27	80.5	15.2	375	1 GDFE_HUMAN	O14793 homo sapien
28	80.5	15.2	375	1 GDFE_MELGA	O42221 meleagris 9
29	80.5	15.2	375	1 GDFE_PIG	O18831 sus scrofa
30	80.5	15.2	376	1 GDFE_MOUSE	O08689 mus musculus
31	80.5	15.2	376	1 GDFE_RAT	O35312 rattus norv
32	80.5	15.2	391	1 IHB_MOUSE	P27093 gallus gall
33	80.5	15.2	407	1 IHB_MOUSE	P09529 homo sapien

ALIGNMENTS

RESULT 1				
PSPN_HUMAN				
ID	PSPN_HUMAN	STANDARD;	PRT;	156 AA.
AC	O60542;			
DT	30-MAY-2000 (Rel. 39, Created)			
DT	30-MAY-2000 (Rel. 39, Last sequence update)			
DT	16-OCT-2001 (Rel. 40, Last annotation update)			
DE	Persephin precursor (PSP).			
GN	PSPN.			
OS	Homo sapiens (Human).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Primates; Catarrhini; Hominoidea; Homo.			
OX	NCBI_TaxID=9606;			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=98150950; PubMed=9491986;			
RA	Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,			
RA	Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotsbauer P.T.,			
RA	Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,			
RA	Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,			
RA	Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,			
RA	Phillips H.S., Johnson E.M.			
RT	"Persephin, a novel neurotrophic factor related to GDNF and			
RL	neurturin."			
RL	Neuron 20:245-253(1998).			
CC	-1- FUNCTION: EXHIBITS NEUROTROPHIC ACTIVITY ON MESENCEPHALIC			
CC	DOPAMINERGIC AND MOTOR NEURONS.			
CC	-1- SUBUNIT: Homodimer; disulfide-linked (By similarity).			
CC	-1- SUBCELLULAR LOCATION: Secreted.			
CC	-1- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.			
CC	-----			
CC	This SWISS-PROT entry is copyright. It is produced through a collaboration			
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CC	the European Bioinformatics Institute. There are no restrictions on its			
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CC	entities requires a license agreement (See <a href="http://www.isb-sib.ch/announce/">http://www.isb-sib.ch/announce/</a>			
CC	or send an email to <a href="mailto:license@isb-sib.ch">license@isb-sib.ch</a> ).			
CC	-----			
DR	EMBL; AF040962; AAC39640.1; -			
DR	HSSP; Q07731; IAGQ.			
DR	Genew; HGNC:9579; PSPN.			
DR	MIM; 602921; -			
DR	GO; GO:0007417; P:central nervous system development; TAS.			
DR	InterPro; IPR002400; GFCysknot.			
DR	InterPro; IPR001839; TGFb.			
DR	Pfam; PF00019; TGF-beta; 1.			
DR	PRINTS; PR00438; GFCYSKNOT.			
DR	SMART; SM00204; TGFb; 1.			
DR	PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.			
KW	Growth factor; Signal.			
FT	SIGNAL	1	21	POTENTIAL.
FT	CHAIN	22	156	PERSEPHIN.
FT	DISULFID	66	124	BY SIMILARITY.
FT	DISULFID	93	152	BY SIMILARITY.
FT	DISULFID	97	154	BY SIMILARITY.

P42917 bos taurus  
Q04906 rattus norv  
Q24735 drosophila  
P20722 mus musculus  
P22004 homo sapien  
P16047 gallus gall  
Q9WU55 rattus norv  
P27091 drosophila  
P48969 stronglyloce  
O18830 ovls aries  
P17125 mus musculus  
P10600 homo sapien

34 80.5 15.2 408 1 IHB\_MOUSE  
35 79 14.9 207 1 BMP6\_MOUSE  
36 79 14.9 436 1 60A\_MOUSE  
37 79 14.9 510 1 BMP6\_MOUSE  
38 79 14.9 513 1 BMP6\_MOUSE  
39 78.5 14.8 412 1 TGF3\_CHICK  
40 77 14.6 351 1 IHB\_MOUSE  
41 77 14.6 455 1 60A\_MOUSE  
42 77 14.6 461 1 DVRL\_STRPU  
43 76.5 14.5 375 1 GDF8\_MOUSE  
44 75.5 14.3 410 1 TGF3\_MOUSE  
45 75.5 14.3 412 1 TGF3\_MOUSE





```

CC -|- SUBUNIT: Homodimer; disulfide-linked.
CC -|- TISSUE SPECIFICITY: WIDESPREAD DISTRIBUTION.
CC -|- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL; U78109; AAC52954.1; --
CC HSP; Q07731; IAGQ.
CC MGD; MG1:108417; Nrtin.
CC InterPro: IPR001839; TGFb.
CC Pfam; PF00019; TGF-beta; 1.
CC SMART; SM00204; TGFb; 1.
CC PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
CC Growth factor; Signal.
CC SIGNAL 1 19 POTENTIAL.
CC CHAIN 20 95 BY SIMILARITY.
CC FT DISULFID 101 163 NEUTURIN.
CC FT DISULFID 128 192 BY SIMILARITY.
CC FT DISULFID 132 194 BY SIMILARITY.
CC FT DISULFID 162 162 INTERCHAIN (BY SIMILARITY).
CC SQ SEQUENCE 195 AA; 22219 MW; ABE21BB35D417448 CRC64;
CC -----
Query Match 40.9%; Score 216.5; DB 1; Length 195;
Best Local Similarity 49.0%; Pred. No. 2e-17;
Matches 47; Conservative 11; Mismatches 31; Indels 7; Gaps 3;
QY 5 PCQLWSLTLSVAELGLGYASEEKVIFRYCAGSPRGARTQHGILARLQ-----GQGRAH 59
DB 100 PCGLRELVRSVSELGLGYTSDETVLFYRCAGACEAAIRI-YDLGLRLRQRRVRERAR 158
QY 60 GPCPCRPRTYD-VAFELDRHRWQRLPQLSAAACGC 94
DB 159 AHPCCRPRTAYEVSFLDVHSRYHTLQELSAECAC 194
RESULT 6
GDNF_MOUSE STANDARD; PRT; 211 AA.
AC P48540; O09058; P70446; P97919; P97920;
DT 01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Glial cell line-derived neurotrophic factor precursor.
GDNF.
GN Mus musculus (Mouse).
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
RC STRAIN=C57BL/10J; TISSUE=Brain;
RA Wang F., Too H.P.;
RL Submitted (OCT-1995) to the EMBL/GenBank/DBJ databases.
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=ICR; TISSUE=Dorsal root ganglion;
RX MEDLINE=95379105; PubMed=7650763;
RA Watabe K., Fukuda T., Tanaka J., Honda H., Toyohara K., Sakai O.;
RT "Spontaneously immortalized adult mouse Schwann cells secrete
RT autocrine and paracrine growth-promoting activities.";
RL J. Neurosci. Res. 41:279-290(1995).
RN [3]
RP SEQUENCE FROM N.A.
RC STRAIN=129/SVJ;
RA Hellmich H., Kos L., Cho E.S., Mahon K.A., Zimmer A.;

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RL Submitted (OCT-1995) to the EMBL/GenBank/DBJ databases.
RN [4]
RP SEQUENCE FROM N.A.
RA Matsushita N., Fujita Y., Nagatsu T., Kiuchi K.;
RL Submitted (OCT-1996) to the EMBL/GenBank/DBJ databases.
CC -|- FUNCTION: NEUROTROPHIC FACTOR THAT ENHANCES SURVIVAL AND
CC MORPHOLOGICAL DIFFERENTIATION OF DOPAMINERGIC NEURONS AND
CC INCREASES THEIR HIGH-AFFINITY DOPAMINE UPTAKE.
CC -|- SUBUNIT: Homodimer; disulfide-linked.
CC -|- SUBCELLULAR LOCATION: Secreted.
CC -|- ALTERNATIVE PRODUCTS:
CC Event-Alternative splicing; Named isoforms=2;
CC Name=1;
CC IsoId=P48540-1; Sequence=Displayed;
CC Name=2;
CC IsoId=P48540-2; Sequence=VSP_006421;
CC -|- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY. GDNF SUBFAMILY.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL; U37459; AAB18672.1; ALT_INIT.
CC EMBL; U66195; AAB07463.1; ALT_INIT.
CC EMBL; U75532; AAB18343.1; ALT_INIT.
CC EMBL; D49921; BAA08660.1; --
CC EMBL; U36449; AAB52953.1; --
CC EMBL; D8264; BAA13566.1; ALT_INIT.
CC EMBL; D88352; BAA12221.1; --
CC EMBL; D88351; BAA12221.1; JOINED.
CC PIR; I49686; I49686.
CC HSP; Q07731; IAGQ.
CC MGD; MG1:107430; Gdnf.
CC GO; GO:0007422; P:peripheral nervous system development; IMP.
CC GO; GO:0030432; P:peristalsis; IMP.
CC InterPro: IPR001839; TGFb.
CC Pfam; PF00019; TGF-beta; 1.
CC SMART; SM00204; TGFb; 1.
CC PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
CC Growth factor; Glycoprotein; Signal; Alternative splicing.
CC SIGNAL 1 19 POTENTIAL.
CC FT PROPEP 20 77 BY SIMILARITY.
CC CHAIN 78 211 GLIAL CELL LINE-DERIVED NEUROTROPHIC
CC FT DISULFID 118 179 FACTOR.
CC FT DISULFID 145 208 BY SIMILARITY.
CC FT DISULFID 149 210 BY SIMILARITY.
CC FT DISULFID 178 178 INTERCHAIN (BY SIMILARITY).
CC FT CARBOHYD 126 126 N-LINKED (GLCNAC. . .) (POTENTIAL).
CC FT CARBOHYD 162 162 N-LINKED (GLCNAC. . .) (POTENTIAL).
CC FT VARSPLIC 25 51 GKRLLEAPADHSLGHRVPFALTSDS -> A (in
CC isoform 2).
CC FT /FTID=VSP_006421.
CC SQ SEQUENCE 211 AA; 23662 MW; B6731C767A3A95B7 CRC64;
Query Match 32.7%; Score 173; DB 1; Length 211;
Best Local Similarity 41.5%; Pred. No. 1.8e-12;
Matches 39; Conservative 15; Mismatches 34; Indels 6; Gaps 3;
QY 6 CQLWSLTLSVAELGLGYASEEKVIFRYCAGSPRGARTQHGILARLQGGRAH----GG 61
DB 118 CVLTATHLVNTDGLGKETKEELIFRYCAGSC-ESAETMYDKILKNLSRRRLTSKVGQ 176
QY 62 PCRPRTRY-TDVAFLDRHRWQRLPQLSAAACGC 94
DB 177 ACCRPVAFDDLSFLDDNLVYHILRKHSKRCGC 210
RESULT 7

```





GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: September 9, 2003, 22:20:04 ; Search time 101 Seconds  
(without alignments)  
245.278 Million cell updates/sec

Title: US-09-474-980B-221  
Perfect score: 529  
Sequence: 1 ALSGPCQLWSLTLVSVELGL.....DRHWQRQLPSAAACGGG 96

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 830525 seqs, 258052604 residues

al number of hits satisfying chosen parameters: 830525

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

- 1: sp\_archaea:\*
- 2: sp\_bacteria:\*
- 3: sp\_fungi:\*
- 4: sp\_human:\*
- 5: sp\_invertebrate:\*
- 6: sp\_mammal:\*
- 7: sp\_mhc:\*
- 8: sp\_organelle:\*
- 9: sp\_phage:\*
- 10: sp\_plant:\*
- 11: sp\_rodent:\*
- 12: sp\_virus:\*
- 13: sp\_vertebrate:\*
- 14: sp\_unclassified:\*
- 15: sp\_virus:\*
- 16: sp\_bacteriaph:\*
- 17: sp\_archaeap:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	233.5	44.1	224	11 Q920L2	Q920L2 mus musculus
2	225.5	42.6	220	4 Q96030	Q96030 homo sapien
3	225.5	42.6	237	4 Q95441	Q95441 homo sapien
4	175.5	33.2	161	11 Q9Q7G0	Q9Q7G0 rattus norv
5	175	33.1	160	6 Q97685	Q97685 macaca mula
6	173	32.7	143	6 Q8MJ77	Q8MJ77 ailuropoda
7	169	31.9	133	4 Q9UD32	Q9UD32 homo sapien
8	169	31.9	185	4 Q96L44	Q96L44 homo sapien
9	158	29.9	143	13 Q8QCE9	Q8QCE9 nipponia ni
10	157	29.7	182	13 Q9IAM2	Q9IAM2 gallus gall
11	157	29.7	215	13 Q9IAM3	Q9IAM3 gallus gall
12	150	28.4	199	11 Q8R485	Q8R485 rattus norv
13	148	28.0	235	13 Q98TU0	Q98TU0 brachydanio
14	135.5	25.6	125	11 Q9JWC3	Q9JWC3 rattus norv
15	95.5	18.1	36	11 Q9JWC0	Q9JWC0 rattus norv
16	94.5	17.9	614	13 Q8JJC1	Q8JJC1 anguilla ja

17	91.5	17.3	359	13	Q8QG53	Q8QG53 sparus aura
18	89.5	16.9	377	13	Q98TB3	Q98TB3 morone chry
19	86.5	16.4	373	13	Q98UB3	Q98UB3 salvelinus
20	86.5	16.4	644	13	Q90974	Q90974 gallus gall
21	85.5	16.2	373	13	Q90W17	Q90W17 salmo salar
22	84.5	16.0	373	13	Q90ZD2	Q90ZD2 oncorhynch
23	84.5	16.0	373	13	Q90ZD1	Q90ZD1 oncorhynch
24	84.5	16.0	373	13	Q9DDI8	Q9DDI8 salmo salar
25	84.5	16.0	376	13	Q98TB4	Q98TB4 oreochromis
26	84.5	16.0	376	13	Q90WC9	Q90WC9 morone saxa
27	84.5	16.0	376	13	Q90WC8	Q90WC8 morone aner
28	84.5	16.0	385	13	Q90W05	Q90W05 sparus aura
29	84.5	16.0	395	13	Q9PWG6	Q9PWG6 anguilla ja
30	83.5	15.8	115	13	Q9DGE9	Q9DGE9 cyprinus ca
31	83.5	15.8	115	13	Q9DGF1	Q9DGF1 cyprinus ca
32	83.5	15.8	115	13	Q9DGB6	Q9DGB6 oryzias lat
33	83.5	15.8	138	13	Q9W6T9	Q9W6T9 brachydanio
34	83.5	15.8	376	13	Q90W06	Q90W06 umbrina cir
35	83.5	15.8	393	13	Q90ZB1	Q90ZB1 brachydanio
36	82.5	15.6	389	13	Q90YY0	Q90YY0 ictalurus p
37	81.5	15.4	115	13	Q9DGF0	Q9DGF0 cyprinus ca
38	81.5	15.4	374	13	Q8JFS0	Q8JFS0 brachydanio
39	81.5	15.4	598	5	Q9XZ62	Q9XZ62 drosophila
40	81.5	15.4	598	5	Q9V4F4	Q9V4F4 drosophila
41	80.5	15.2	162	6	Q9TSY2	Q9TSY2 sus scrofa
42	80.5	15.2	364	13	Q9PVK1	Q9PVK1 gallus cabal
43	80.5	15.2	375	6	Q9GM97	Q9GM97 equus cabal
44	80.5	15.2	375	6	Q8WNS6	Q8WNS6 bos taurus
45	80.5	15.2	375	6	Q95J86	Q95J86 macaca fasc

ALIGNMENTS

RESULT 1

ID	Q920L2	PRELIMINARY;	PRT;	224 AA.
AC	Q920L2;			
DT	01-MAY-1999 (TREMBLrel. 10, Created)			
DT	01-MAY-1999 (TREMBLrel. 10, Last sequence update)			
DT	01-MAR-2003 (TREMBLrel. 23, Last annotation update)			
DE	Neurotrophic factor artemin precursor (Adult MALE testis CDNA, RIKEN			
DE	FULL-length enriched LIBRARY, clone:4930445K15, FULL INSERT sequence)			
DE	(Artemin).			
GN	ARTN.			
OS	Mus musculus (Mouse).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.			
OX	NCBI_taxid=10090;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=99098192; PubMed=9883723;			
RA	Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,			
RA	Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,			
RA	Milbrandt J.;			
RT	"Artemin, a novel member of the GDNF ligand family, supports			
RT	peripheral and central neurons and signals through the GFRalpha3-RET			
RT	receptor complex.";			
RL	Neuron 21:1291-1302(1998).			
RN	[2]			
RP	SEQUENCE FROM N.A.			
RC	STRAIN=C57BL/6J; TISSUE=Testis;			
RX	MEDLINE=21085660; PubMed=11217851;			
RA	Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,			
RA	Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,			
RA	Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,			
RA	Saito T., Okazaki Y., Gojibori T., Bono H., Kasukawa T., Saito R.,			
RA	Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,			
RA	Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,			
RA	Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,			
RA	Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,			
RA	Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,			
RA	Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,			

RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,  
RA Gustincich S., Hall D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,  
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,  
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,  
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,  
RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,  
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,  
RA Hayashizaki Y.,  
RA "Functional annotation of a full-length mouse cDNA collection."  
RL Nature 409:685-690(2001).  
[3]  
RN SEQUENCE FROM N.A.  
RP STRAIN=C57BL/6J; TISSUE=Oviduct;  
RX MEDLINE=22354683; PubMed=12466851;  
RA The FANTOM Consortium,  
RA "Analysis of the mouse transcriptome based on functional annotation of  
RT 60,770 full-length cDNAs."  
RL Nature 420:563-573(2002).  
CC -1- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.  
EMBL: AF109402; AAC98691.1; -  
EMBL: AK015393; BAB29827.1; -  
EMBL: AK053914; BAC35590.1; -  
DR HSSP: Q07731; IAGQ.  
DR MGD: MGI:1333791; Artin.  
DR InterPro: IPR001839; TGFb.  
DR Pfam: PF00019; TGF-beta; 1.  
DR SMART: SM00204; TGFb; 1.  
FT CHAIN 112 224 NEUTROTROPHIC FACTOR ARTEMIN.  
SQ SEQUENCE 224 AA; 23726 MW; 3328FB794561DF0B CRC64;  
Query Match 44.1%; Score 233.5; DB 11; Length 224;  
Best Local Similarity 48.5%; Pred. No. 3.1e-18;  
Matches 48; Conservative 15; Mismatches 27; Indels 9; Gaps 2;  
QY 6 COLWSLTLSVAELGLGYASEKVIIPRYCAGSCPRGARTQHGIALARLQGG-----R 57  
DB 127 CLRSLQVLPVSAELGLGHSDELVRFCGSC-RRARSQHLDSLALSLGAGALRPPGSR 185  
QY 58 AHGGPCCRPRYTDVAFLLDRHRWQRLPOLSAACGCGG 96  
DB 186 PISQPCCRPRYEAIVFMDVNSTWRTVDHLSATACGCLG 224  
RESULT 2  
ID O96030 PRELIMINARY; PRT; 220 AA.  
AC O96030:  
01-MAY-1999 (TREMBlrel. 10, Created)  
01-OCT-2002 (TREMBlrel. 10, Last sequence update)  
01-OCT-2002 (TREMBlrel. 22, Last annotation update)  
Artemin.  
DE ARTIN OR EVN.  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  
OX NCBI\_TaxID=9606;  
[1]  
RN SEQUENCE FROM N.A.  
RP MEDLINE=99098192; PubMed=9883723;  
RA Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,  
RA Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,  
RA Milbrandt J.;  
RA "Artemin, a novel member of the GDNF ligand family, supports  
RT peripheral and central neurons and signals through the Gfra1pha3-RET  
RT receptor complex."  
RL Neuron 21:1291-1302(1998).  
CC -1- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.  
EMBL: AF115765; AAD13110.1; -  
DR HSSP: Q07731; IAGQ.  
DR Genew; HGNC:727; ARTN.  
DR InterPro: IPR001839; TGFb.  
DR Pfam: PF00019; TGF-beta; 1.  
DR SMART: SM00204; TGFb; 1.  
SQ SEQUENCE 237 AA; 24471 MW; 11C64C4B510CE3AB CRC64;  
Query Match 42.6%; Score 225.5; DB 4; Length 237;  
Best Local Similarity 48.5%; Pred. No. 2.6e-17;  
Matches 48; Conservative 13; Mismatches 29; Indels 9; Gaps 2;  
QY 6 COLWSLTLSVAELGLGYASEKVIIPRYCAGSCPRGARTQHGIALARLQGG-----R 57

RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,  
RA Gustincich S., Hall D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,  
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,  
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,  
RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,  
RA Suzuki H., Toyooka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,  
RA Wynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,  
RA Hayashizaki Y.,  
RA "Functional annotation of a full-length mouse cDNA collection."  
RL Nature 409:685-690(2001).  
[3]  
RN SEQUENCE FROM N.A.  
RP STRAIN=C57BL/6J; TISSUE=Oviduct;  
RX MEDLINE=22354683; PubMed=12466851;  
RA The FANTOM Consortium,  
RA "Analysis of the mouse transcriptome based on functional annotation of  
RT 60,770 full-length cDNAs."  
RL Nature 420:563-573(2002).  
CC -1- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.  
EMBL: AF109402; AAC98691.1; -  
EMBL: AK015393; BAB29827.1; -  
EMBL: AK053914; BAC35590.1; -  
DR HSSP: Q07731; IAGQ.  
DR MGD: MGI:1333791; Artin.  
DR InterPro: IPR001839; TGFb.  
DR Pfam: PF00019; TGF-beta; 1.  
DR SMART: SM00204; TGFb; 1.  
FT CHAIN 112 224 NEUTROTROPHIC FACTOR ARTEMIN.  
SQ SEQUENCE 224 AA; 23726 MW; 3328FB794561DF0B CRC64;  
Query Match 44.1%; Score 233.5; DB 11; Length 224;  
Best Local Similarity 48.5%; Pred. No. 3.1e-18;  
Matches 48; Conservative 15; Mismatches 27; Indels 9; Gaps 2;  
QY 6 COLWSLTLSVAELGLGYASEKVIIPRYCAGSCPRGARTQHGIALARLQGG-----R 57  
DB 127 CLRSLQVLPVSAELGLGHSDELVRFCGSC-RRARSQHLDSLALSLGAGALRPPGSR 185  
QY 58 AHGGPCCRPRYTDVAFLLDRHRWQRLPOLSAACGCGG 96  
DB 186 PISQPCCRPRYEAIVFMDVNSTWRTVDHLSATACGCLG 224  
RESULT 2  
ID O96030 PRELIMINARY; PRT; 220 AA.  
AC O96030:  
01-MAY-1999 (TREMBlrel. 10, Created)  
01-OCT-2002 (TREMBlrel. 10, Last sequence update)  
01-OCT-2002 (TREMBlrel. 22, Last annotation update)  
Artemin.  
DE ARTIN OR EVN.  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  
OX NCBI\_TaxID=9606;  
[1]  
RN SEQUENCE FROM N.A.  
RP MEDLINE=99098192; PubMed=9883723;  
RA Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,  
RA Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,  
RA Milbrandt J.;  
RA "Artemin, a novel member of the GDNF ligand family, supports  
RT peripheral and central neurons and signals through the Gfra1pha3-RET  
RT receptor complex."  
RL Neuron 21:1291-1302(1998).  
CC -1- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.  
EMBL: AF115765; AAD13110.1; -  
DR HSSP: Q07731; IAGQ.  
DR Genew; HGNC:727; ARTN.  
DR InterPro: IPR001839; TGFb.  
DR Pfam: PF00019; TGF-beta; 1.  
DR SMART: SM00204; TGFb; 1.  
SQ SEQUENCE 237 AA; 24471 MW; 11C64C4B510CE3AB CRC64;  
Query Match 42.6%; Score 225.5; DB 4; Length 237;  
Best Local Similarity 48.5%; Pred. No. 2.6e-17;  
Matches 48; Conservative 13; Mismatches 29; Indels 9; Gaps 2;  
QY 6 COLWSLTLSVAELGLGYASEKVIIPRYCAGSCPRGARTQHGIALARLQGG-----R 57

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RESULT 7
Q9UD32
ID Q9UD32 PRELIMINARY; PRT; 133 AA.
AC Q9UD32;
DT 01-MAY-2000 (TREMBLrel. 13, Created)
DT 01-MAY-2000 (TREMBLrel. 13, Last sequence update)
DT 01-MAR-2003 (TREMBLrel. 23, Last annotation update)

```

```
DE ASTROCYTE-derived TROPHIC factor 2, ATF-2.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=95172201; PubMed=7867768;
RA Schaar D.G., Steiber B.A., Sherwood A.C., Dean D., Mendoza G.,
RA Ramakrishnan L., Dreyfus C.F., Black I.B.;
RT "Multiple astrocyte transcripts encode nigral trophic factors in rat
RT and human.";
RL Exp. Neurol. 130:387-393(1994).
CC -!- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
DR HSP; Q07731; LAGO.
DR InterPro; IPR002400; GF_Cysknot.
DR Pfam; PF00019; TGF-beta; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR SMART; SM00204; TGF-beta; 1.
DR SEQUENCE 133 AA; 14736 MW; B46B96DD5F679769 CRC64;
Query Match 31.9%; Score 169; DB 4; Length 133;
Best Local Similarity 41.5%; Pred. No. 3e-11;
Matches 39; Conservative 15; Mismatches 34; Indels 6; Gaps 3;
QY 6 COLWSLTSLVAELGLGYASEEKVIFRYCAGSPRGARTQGLALARLQCGGR----AHGG 61
DB 40 CVLTALHNLVTDLGLGYETKEELIFRYCSGCD-AAETTYDKILNLSNRRLVSDKVGQ 98
QY 62 PCRPRTRY-TDVAFLDDRHWORLPOLSAACGC 94
DB 99 ACCRPTAFDDLSFLDDNLVYHLKHSKRGC 132
RESULT 8
Q96144 ID Q96144 PRELIMINARY; PRT; 185 AA.
AC Q96144;
DT 01-DEC-2001 (TrEMBLrel. 19, Created)
DT 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Glial cell-derived neurotrophic factor isoform.
GN GDNF.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX Zhang B., Feng Z., Zhou Y., Peng X., Yuan J., Qiang B.;
RL Submitted (AUG-2001) to the EMBL/GenBank/DBJ databases.
CC -!- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
DR EMBL; AY052832; AAL11017.1; -.
DR InterPro; IPR001839; TGF-beta; 1.
DR Pfam; PF00019; TGF-beta; 1.
DR SMART; SM00204; TGF-beta; 1.
DR SEQUENCE 185 AA; 20885 MW; 1988C50DA5EA1B10 CRC64;
Query Match 31.9%; Score 169; DB 4; Length 185;
Best Local Similarity 41.5%; Pred. No. 4.2e-11;
Matches 39; Conservative 15; Mismatches 34; Indels 6; Gaps 3;
QY 6 COLWSLTSLVAELGLGYASEEKVIFRYCAGSPRGARTQGLALARLQCGGR----AHGG 61
DB 92 CVLTALHNLVTDLGLGYETKEELIFRYCSGCD-AAETTYDKILNLSNRRLVSDKVGQ 150
QY 62 PCRPRTRY-TDVAFLDDRHWORLPOLSAACGC 94
DB 151 ACCRPTAFDDLSFLDDNLVYHLKHSKRGC 184
RESULT 9
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Q8QGE9 ID Q8QGE9 PRELIMINARY; PRT; 143 AA.
AC Q8QGE9;
DT 01-JUN-2002 (TrEMBLrel. 21, Created)
DT 01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Glial cell line-derived neurotrophic factor GDNF (Fragment).
GN GDNF.
OS Nipponia nippon.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Ciconiiformes; Threskiornithidae;
OC Nipponia.
OX NCBI_TaxID=128390;
RN [1]
RP SEQUENCE FROM N.A.
RA Zheng H., Fang S., Xi Y., Fujihara N.;
RT "Cloning and expression of glial cell line-derived neurotrophic factor
RT (GDNF) of Nipponia nippon.";
RL Submitted (JAN-2002) to the EMBL/GenBank/DBJ databases.
CC -!- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
DR EMBL; AF469665; AAL79041.1; -.
DR InterPro; IPR002400; GF_Cysknot.
DR Pfam; PF00019; TGF-beta; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR SMART; SM00204; TGF-beta; 1.
DR NON_TER 143
FT NON_TER 143
SQ SEQUENCE 143 AA; 16507 MW; 26ADBB9C00B6231E CRC64;
Query Match 29.9%; Score 158; DB 13; Length 143;
Best Local Similarity 39.4%; Pred. No. 5.5e-10;
Matches 37; Conservative 16; Mismatches 35; Indels 6; Gaps 3;
QY 6 COLWSLTSLVAELGLGYASEEKVIFRYCAGSPRGARTQGLALARLQCGGRHGG----61
DB 50 CVLTALHNLVTDLGLGYETKEELIFRYCSGCD-AAETTYDKILNLSNRRLVSDKVGQ 108
QY 62 PCRPRTRY-TDVAFLDDRHWORLPOLSAACGC 94
DB 109 ACCRPTAFDDLSFLDDNLVYHLKHSKRGC 142
RESULT 10
Q9IAM2 ID Q9IAM2 PRELIMINARY; PRT; 182 AA.
AC Q9IAM2;
DT 01-OCT-2000 (TrEMBLrel. 15, Created)
DT 01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE Glial cell line-derived neurotrophic factor short form
DE (Fragment).
OS Gallus gallus (Chicken).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Archosauria; Aves; Neognathae; Galliformes; Phasianinae;
OC Gallus.
OX NCBI_TaxID=9031;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=20092738; PubMed=10625540;
RA Homma S., Oppenheim R.W., Yaginuma H., Kimura S.;
RT "Expression pattern of GDNF, c-ret, and GFRalphas suggests novel roles
RT for GDNF ligands during early organogenesis in the chick embryo.";
RL Dev. Biol. 217:121-137(2000).
CC -!- SIMILARITY: BELONGS TO THE TGF-BETA FAMILY.
DR EMBL; AF176018; AAF26685.1; -.
DR HSP; Q07731; LAGO.
DR InterPro; IPR001839; TGF-beta; 1.
DR Pfam; PF00019; TGF-beta; 1.
DR NON_TER 182
FT NON_TER 182
SQ SEQUENCE 182 AA; 20740 MW; 6A8AC16BD1B4F103 CRC64;
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GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: September 9, 2003, 22:21:04 ; Search time 29 Seconds  
(without alignments)  
140.064 Million cell updates/sec

Title: US-09-474-980B-221  
Perfect score: 529  
Sequence: 1 ALSGPQLWSLTLSVAELGL.....DRHWQLPOLSAACCGG 96

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

al number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA.\*

- 1: /cgn2\_6/ptodata/1/1aa/5A-COMB.pep.\*
- 2: /cgn2\_6/ptodata/1/1aa/5B-COMB.pep.\*
- 3: /cgn2\_6/ptodata/1/1aa/6A-COMB.pep.\*
- 4: /cgn2\_6/ptodata/1/1aa/6B-COMB.pep.\*
- 5: /cgn2\_6/ptodata/1/1aa/PCTUS-COMB.pep.\*
- 6: /cgn2\_6/ptodata/1/1aa/backfiles1.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	529	100.0	96	3	US-08-931-858E-221
2	529	100.0	96	3	US-09-220-528-15
3	529	100.0	133	3	US-08-931-858E-132
4	529	100.0	156	3	US-08-931-858E-217
5	492	93.0	89	3	US-08-931-858E-223
6	492	93.0	89	3	US-09-220-528-18
7	439	83.0	96	3	US-08-931-858E-80
8	439	83.0	96	3	US-08-931-858E-187
9	439	83.0	96	3	US-08-981-739-80
10	439	83.0	96	4	US-08-128-026-80
11	439	83.0	134	3	US-08-981-739-81
12	439	83.0	134	4	US-09-128-026-81
13	439	83.0	142	3	US-08-931-858E-111
14	439	83.0	142	3	US-08-981-739-111
15	439	83.0	142	4	US-09-128-026-111
16	439	83.0	156	3	US-08-931-858E-185
17	439	83.0	185	3	US-08-981-739-133
18	439	83.0	185	4	US-09-128-026-133
19	433	81.9	96	3	US-08-931-858E-198
20	433	81.9	156	3	US-08-931-858E-196
21	433	81.9	185	3	US-08-981-739-136
22	433	81.9	185	4	US-09-128-026-136
23	425	80.3	91	3	US-08-931-858E-89
24	425	80.3	91	3	US-08-981-739-89
25	425	80.3	91	4	US-09-128-026-89
26	423	80.0	91	3	US-08-931-858E-83
27	423	80.0	91	3	US-08-981-739-83

28	423	80.0	91	4	US-09-128-026-83	Sequence 83, Appl
29	413	78.1	89	3	US-08-931-858E-79	Sequence 79, Appl
30	413	78.1	89	3	US-08-981-739-79	Sequence 79, Appl
31	413	78.1	89	4	US-09-128-026-79	Sequence 79, Appl
32	411	77.7	89	3	US-08-931-858E-82	Sequence 82, Appl
33	411	77.7	89	3	US-08-981-739-82	Sequence 82, Appl
34	411	77.7	89	4	US-09-128-026-82	Sequence 82, Appl
35	363.5	68.7	96	3	US-08-931-858E-141	Sequence 141, App
36	363.5	68.7	96	3	US-08-981-739-141	Sequence 141, App
37	363.5	68.7	96	4	US-09-128-026-141	Sequence 141, App
38	338	63.9	73	3	US-08-931-858E-106	Sequence 106, App
39	292	55.2	100	3	US-08-931-858E-146	Sequence 146, App
40	292	55.2	100	3	US-08-981-739-146	Sequence 146, App
41	292	55.2	100	4	US-09-128-026-146	Sequence 146, App
42	233.5	44.1	113	3	US-09-220-528-34	Sequence 34, Appl
43	233.5	44.1	116	3	US-09-220-528-35	Sequence 35, Appl
44	233.5	44.1	144	3	US-09-220-528-36	Sequence 36, Appl
45	233.5	44.1	185	3	US-09-220-528-41	Sequence 41, Appl

ALIGNMENTS

RESULT 1  
US-08-931-858E-221  
; Sequence 221, Application US/08931858E  
; Patent No. 622022  
; GENERAL INFORMATION:  
; APPLICANT: JOHNSON, EUGENE M  
; APPLICANT: MILBRANDT, JEFFREY D  
; APPLICANT: KOTZBAUER, PAUL T  
; APPLICANT: LAMPE, PATRICIA A  
; APPLICANT: KLEIN, ROBERT  
; APPLICANT: DESAUVAGE, FRED  
; TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR  
; NUMBER OF SEQUENCES: 239  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
; STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
; CITY: ST. LOUIS  
; STATE: MO  
; COUNTRY: USA  
; ZIP: 63105  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.30  
; CURRENT APPLICATION DATA: US/08931,858E  
; FILING DATE:  
; CLASSIFICATION: 435  
; ATTORNEY/AGENT INFORMATION:  
; NAME: HOLLAND, DONALD R.  
; REGISTRATION NUMBER: 35,197  
; REFERENCE/DOCKET NUMBER: 971486  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: 314-727-5188  
; TELEFAX: 314-727-6092  
; INFORMATION FOR SEQ ID NO: 221:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 96 amino acids  
; TYPE: amino acid  
; STRANDEDNESS:  
; TOPOLOGY: linear  
; MOLECULE TYPE: peptide  
; US-08-931-858E-221

Query Match 100.0%; Score 529; DB 3; Length 96;  
Best Local Similarity 100.0%; Pred. No. 3.2e-59;  
Matches 96; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 ALSGPCQLWSLTLSVAELGLVASEKVIIFYRACGSCPRGANTQHLALRIQGGRAHG 60

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Db 1 ALSGPCQLWSLTSVAELGLGYASEKVFIRYCAGSCPRGARTQHG LALARLQGGRAHG 60
QY 61 GPCCRPTRYTDVAFDDRRHWRLPQLSAAACGCGG 96
Db 61 GPCCRPTRYTDVAFDDRRHWRLPQLSAAACGCGG 96

RESULT 2
US-09-220-528-15
; Sequence 15, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
; FILE REFERENCE: 6029-7998
; CURRENT APPLICATION NUMBER: US/09/220,528A
; EARLIER FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 15
; LENGTH: 96
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-528-15

Query Match 100.0%; Score 529; DB 3; Length 96;
Best Local Similarity 100.0%; Pred. No. 3.2e-59;
Matches 96; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ALSGPCQLWSLTSVAELGLGYASEKVFIRYCAGSCPRGARTQHG LALARLQGGRAHG 60
Db 1 ALSGPCQLWSLTSVAELGLGYASEKVFIRYCAGSCPRGARTQHG LALARLQGGRAHG 60
QY 61 GPCCRPTRYTDVAFDDRRHWRLPQLSAAACGCGG 96
Db 61 GPCCRPTRYTDVAFDDRRHWRLPQLSAAACGCGG 96

RESULT 3
US-08-931-858E-132
; Sequence 132, Application US/08931858E
; Patent No. 6222022
; GENERAL INFORMATION:
; APPLICANT: JOHNSON, EUGENE M
; APPLICANT: MILBRANDT, JEFFREY D
; APPLICANT: KOTZBAUER, PAUL T
; APPLICANT: LAMPE, PATRICIA A
; APPLICANT: KLEIN, ROBERT
; APPLICANT: DESAUVAGE, FRED
; TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
; NUMBER OF SEQUENCES: 239
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: HOWELL & HAFERKAMP, L.C.
; STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
; CITY: ST. LOUIS
; STATE: MO
; COUNTRY: USA
; ZIP: 63105
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/931,858E
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: HOLLAND, DONALD R.
; REGISTRATION NUMBER: 35,197
; REFERENCE/DOCKET NUMBER: 971486
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 314-727-5188
; TELEFAX: 314-727-6092
; INFORMATION FOR SEQ ID NO: 217:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 156 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
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; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: HOLLAND, DONALD R.
; REGISTRATION NUMBER: 35,197
; REFERENCE/DOCKET NUMBER: 971486
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 314-727-5188
; TELEFAX: 314-727-6092
; INFORMATION FOR SEQ ID NO: 132:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 133 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-931-858E-132

Query Match 100.0%; Score 529; DB 3; Length 133;
Best Local Similarity 100.0%; Pred. No. 4.8e-59;
Matches 96; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ALSGPCQLWSLTSVAELGLGYASEKVFIRYCAGSCPRGARTQHG LALARLQGGRAHG 60
Db 38 ALSGPCQLWSLTSVAELGLGYASEKVFIRYCAGSCPRGARTQHG LALARLQGGRAHG 97
QY 61 GPCCRPTRYTDVAFDDRRHWRLPQLSAAACGCGG 96
Db 98 GPCCRPTRYTDVAFDDRRHWRLPQLSAAACGCGG 133

RESULT 4
US-08-931-858E-217
; Sequence 217, Application US/08931858E
; Patent No. 6222022
; GENERAL INFORMATION:
; APPLICANT: JOHNSON, EUGENE M
; APPLICANT: MILBRANDT, JEFFREY D
; APPLICANT: KOTZBAUER, PAUL T
; APPLICANT: LAMPE, PATRICIA A
; APPLICANT: KLEIN, ROBERT
; APPLICANT: DESAUVAGE, FRED
; TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
; NUMBER OF SEQUENCES: 239
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: HOWELL & HAFERKAMP, L.C.
; STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
; CITY: ST. LOUIS
; STATE: MO
; COUNTRY: USA
; ZIP: 63105
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/931,858E
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: HOLLAND, DONALD R.
; REGISTRATION NUMBER: 35,197
; REFERENCE/DOCKET NUMBER: 971486
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 314-727-5188
; TELEFAX: 314-727-6092
; INFORMATION FOR SEQ ID NO: 217:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 156 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
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MOLECULE TYPE: peptide  
US-08-931-858E-217

Query Match 100.0%; Score 529; DB 3; Length 156;  
Best Local Similarity 100.0%; Pred. No. 5.8e-59;  
Matches 96; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLQGGRAHG 60  
DB 61 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLQGGRAHG 120  
QY 61 GPCCRPRTYDVAFLDDRHWRLPOLSAACGGCG 96  
DB 121 GPCCRPRTYDVAFLDDRHWRLPOLSAACGGCG 156

## RESULT 5

US-08-931-858E-223  
Sequence 223, Application US/08931858E  
Patent No. 622022

## GENERAL INFORMATION:

APPLICANT: JOHNSON, EUGENE M  
APPLICANT: MILBRANDT, JEFFREY D  
APPLICANT: KOTZBAUER, PAUL T  
APPLICANT: LAMPE, PATRICIA A  
APPLICANT: KLEIN, ROBERT  
APPLICANT: DESAUVAGE, FRED  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR  
NUMBER OF SEQUENCES: 239  
CORRESPONDENCE ADDRESS:

ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MO  
COUNTRY: USA  
ZIP: 63105

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/931,858E  
FILING DATE:

## CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 971486  
TELEPHONE: 314-727-5188  
TELEFAX: 314-727-6092

## INFORMATION FOR SEQ ID NO: 223:

SEQUENCE CHARACTERISTICS:  
LENGTH: 89 amino acids  
TYPE: amino acid  
STRANDEDNESS:  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
US-08-931-858E-223

Query Match 93.0%; Score 492; DB 3; Length 89;  
Best Local Similarity 100.0%; Pred. No. 1.3e-54;  
Matches 89; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 6 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLQGGRAHGPCCR 65  
DB 1 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLQGGRAHGPCCR 60  
QY 66 PTRYDVAFLDDRHWRLPOLSAACGC 94  
DB 61 PTRYDVAFLDDRHWRLPOLSAACGC 89

## RESULT 6

US-09-220-528-18  
Sequence 18, Application US/09220528A  
Patent No. 6284540  
GENERAL INFORMATION:

APPLICANT: Milbrandt, Jeffrey D.  
APPLICANT: Baloh, Robert H.  
TITLE OF INVENTION: Artemin, A No. 6284540e1 Neurotrophic Factor  
FILE REFERENCE: 6029-7998  
CURRENT APPLICATION NUMBER: US/09/220,528A  
CURRENT FILING DATE: 1998-12-24  
EARLIER APPLICATION NUMBER: 09/218,698  
EARLIER FILING DATE: 1998-12-22  
EARLIER APPLICATION NUMBER: 60/108,148  
EARLIER FILING DATE: 1998-11-12  
EARLIER APPLICATION NUMBER: 09/163,283  
EARLIER FILING DATE: 1998-09-29  
NUMBER OF SEQ ID NOS: 120  
SOFTWARE: Patent In Ver. 2.0  
SEQ ID NO 18  
LENGTH: 89  
TYPE: PRT  
ORGANISM: Homo sapiens  
US-09-220-528-18

Query Match 93.0%; Score 492; DB 3; Length 89;  
Best Local Similarity 100.0%; Pred. No. 1.3e-54;  
Matches 89; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 6 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLQGGRAHGPCCR 65  
DB 1 COLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGARTOHGLALARLQGGRAHGPCCR 60  
QY 66 PTRYDVAFLDDRHWRLPOLSAACGC 94  
DB 61 PTRYDVAFLDDRHWRLPOLSAACGC 89

## RESULT 7

US-08-931-858E-80  
Sequence 80, Application US/08931858E  
Patent No. 622022

## GENERAL INFORMATION:

APPLICANT: JOHNSON, EUGENE M  
APPLICANT: MILBRANDT, JEFFREY D  
APPLICANT: KOTZBAUER, PAUL T  
APPLICANT: LAMPE, PATRICIA A  
APPLICANT: KLEIN, ROBERT  
APPLICANT: DESAUVAGE, FRED  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR  
NUMBER OF SEQUENCES: 239  
CORRESPONDENCE ADDRESS:

ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MO  
COUNTRY: USA  
ZIP: 63105

## COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: Patent In Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/931,858E  
FILING DATE:

## CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 971486  
TELECOMMUNICATION INFORMATION:

TELEPHONE: 314-727-5188  
TELEFAX: 314-727-6092  
INFORMATION FOR SEQ ID NO: 80:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 96 amino acids  
TYPE: amino acid  
STRANDEDNESS:  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-931-858E-80

Query Match 83.0%; Score 439; DB 3; Length 96;  
Best Local Similarity 81.2%; Pred. No. 6.9e-48;  
Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;

QY 1 ALSGPCQLWSLTLSVAELGLGYASEKVFYRYCAGSCPRGARTQHGILALRLQGGRAHG 60  
DB 1 ALAGSCLWSLTLPVAELGLGYASEKVFYRYCAGSCPQEQARTQHSVLRLRGRGAHG 60  
QY 61 GPCCRPTRYTDVAFDDRRHWQLPQLSAAACGCGG 96  
DB 61 RPCCQPTSYADVTFDDQHHWQQLPQLSAAACGCGG 96

RESULT 8  
US-08-931-858E-187  
Sequence 187, Application US/08931858E  
Patent No. 6222022  
GENERAL INFORMATION:  
APPLICANT: JOHNSON, EUGENE M.  
APPLICANT: MILBRANDT, JEFFREY D  
APPLICANT: KOTZBRAUER, PAUL T  
APPLICANT: LAMPE, PATRICIA A  
APPLICANT: KLEIN, ROBERT  
APPLICANT: DESAUVAGE, FRED  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR  
NUMBER OF SEQUENCES: 239  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MO  
COUNTRY: USA  
ZIP: 63105  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/931,858E  
FILING DATE:  
CLASSIFICATION: 435  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 971486  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 314-727-5188  
TELEFAX: 314-727-6092  
INFORMATION FOR SEQ ID NO: 187:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 96 amino acids  
TYPE: amino acid  
STRANDEDNESS:  
TOPOLOGY: linear  
MOLECULE TYPE: peptide  
US-08-931-858E-187

Query Match 83.0%; Score 439; DB 3; Length 96;  
Best Local Similarity 81.2%; Pred. No. 6.9e-48;  
Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;

QY 1 ALSGPCQLWSLTLSVAELGLGYASEKVFYRYCAGSCPRGARTQHGILALRLQGGRAHG 60  
DB 1 ALAGSCLWSLTLPVAELGLGYASEKVFYRYCAGSCPQEQARTQHSVLRLRGRGAHG 60  
QY 61 GPCCRPTRYTDVAFDDRRHWQLPQLSAAACGCGG 96  
DB 61 RPCCQPTSYADVTFDDQHHWQQLPQLSAAACGCGG 96

RESULT 9  
US-08-981-739-80  
Sequence 80, Application US/08981739  
Patent No. 6232449  
GENERAL INFORMATION:  
APPLICANT: JOHNSON JR., EUGENE M.  
APPLICANT: MILBRANDT, JEFFREY D.  
APPLICANT: KOTZBRAUER, PAUL T.  
APPLICANT: LAMPE, PATRICIA A.  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS  
NUMBER OF SEQUENCES: 176  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAFERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MISSOURI  
COUNTRY: US  
ZIP: 63105-1817  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/981,739  
FILING DATE: 31-Aug-1998  
CLASSIFICATION: <Unknown>  
PRIOR APPLICATION DATA:  
APPLICATION NUMBER: PCT/US97/03461  
FILING DATE: <Unknown>  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 976163  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (314) 727-5188  
TELEFAX: (314) 727-6092  
INFORMATION FOR SEQ ID NO: 80:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 96 amino acids  
TYPE: amino acid  
STRANDEDNESS: <Unknown>  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
SEQUENCE DESCRIPTION: SEQ ID NO: 80:  
US-08-981-739-80

Query Match 83.0%; Score 439; DB 3; Length 96;  
Best Local Similarity 81.2%; Pred. No. 6.9e-48;  
Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;

QY 1 ALSGPCQLWSLTLSVAELGLGYASEKVFYRYCAGSCPRGARTQHGILALRLQGGRAHG 60  
DB 1 ALAGSCLWSLTLPVAELGLGYASEKVFYRYCAGSCPQEQARTQHSVLRLRGRGAHG 60  
QY 61 GPCCRPTRYTDVAFDDRRHWQLPQLSAAACGCGG 96  
DB 61 RPCCQPTSYADVTFDDQHHWQQLPQLSAAACGCGG 96

RESULT 10  
US-09-128-026-80  
Sequence 80, Application US/09128026  
Patent No. 6403335

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;
; GENERAL INFORMATION:
; APPLICANT: JOHNSON JR., EUGENE M.
; APPLICANT: MILBRANDT, JEFFREY D.
; APPLICANT: KOTZBAUER, PAUL T.
; APPLICANT: LAMPE, PATRICIA A.
; TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
; NUMBER OF SEQUENCES: 176
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: HOWELL & HAFERKAMP, L.C.
; STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
; CITY: ST. LOUIS
; STATE: MISSOURI
; COUNTRY: US
; ZIP: 63105-1817
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/128.026
; FILING DATE:
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: HOLLAND, DONALD R.
; REGISTRATION NUMBER: 35,197
; REFERENCE/DOCKET NUMBER: 976163
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (314) 727-5188
; TELEFAX: (314) 727-6092
; INFORMATION FOR SEQ ID NO: 80:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 96 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-128-026-80

Query Match      83.0%; Score 439; DB 4; Length 96;
Best Local Similarity 81.2%; Pred. No. 6.9e-48;
Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;

QY 1 ALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGCPRGARTQHGIALARLQCGGRAHG 60
Db 1 ALAGSCLWSLTLPVAELGLGYASEEKVIFRYCAGCPQEARQHSVLARLGRGRAHG 60
61 GPCCRPTRYTDVAFLLDRHRWQLPOLSAACGCGG 96
61 RPPCQPTSYADVTFLLDDHHWQQLPOLSAACGCGG 96

RESULT 11
US-08-981-739-81
; Sequence 81, Application US/08981739
; Patent No. 6232449
; GENERAL INFORMATION:
; APPLICANT: JOHNSON JR., EUGENE M.
; APPLICANT: MILBRANDT, JEFFREY D.
; APPLICANT: KOTZBAUER, PAUL T.
; APPLICANT: LAMPE, PATRICIA A.
; TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
; NUMBER OF SEQUENCES: 176
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: HOWELL & HAFERKAMP, L.C.
; STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
; CITY: ST. LOUIS
; STATE: MISSOURI
; COUNTRY: US
; ZIP: 63105-1817
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
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; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/981,739
; FILING DATE: 31-Aug-1998
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/US97/03461
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: HOLLAND, DONALD R.
; REGISTRATION NUMBER: 35,197
; REFERENCE/DOCKET NUMBER: 976163
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (314) 727-5188
; TELEFAX: (314) 727-6092
; INFORMATION FOR SEQ ID NO: 81:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 134 amino acids
; TYPE: amino acid
; STRANDEDNESS: <Unknown>
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 81:
US-08-981-739-81

Query Match      83.0%; Score 439; DB 3; Length 134;
Best Local Similarity 81.2%; Pred. No. 1e-47;
Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;

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Db 39 ALAGSCLWSLTLPVAELGLGYASEEKVIFRYCAGCPQEARQHSVLARLGRGRAHG 98
61 GPCCRPTRYTDVAFLLDRHRWQLPOLSAACGCGG 96
99 RPPCQPTSYADVTFLLDDHHWQQLPOLSAACGCGG 134

RESULT 12
US-09-128-026-81
; Sequence 81, Application US/09128026
; Patent No. 6403335
; GENERAL INFORMATION:
; APPLICANT: JOHNSON JR., EUGENE M.
; APPLICANT: MILBRANDT, JEFFREY D.
; APPLICANT: KOTZBAUER, PAUL T.
; APPLICANT: LAMPE, PATRICIA A.
; TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
; NUMBER OF SEQUENCES: 176
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: HOWELL & HAFERKAMP, L.C.
; STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
; CITY: ST. LOUIS
; STATE: MISSOURI
; COUNTRY: US
; ZIP: 63105-1817
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/128.026
; FILING DATE:
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: HOLLAND, DONALD R.
; REGISTRATION NUMBER: 35,197
; REFERENCE/DOCKET NUMBER: 976163
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (314) 727-5188
; TELEFAX: (314) 727-6092
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; INFORMATION FOR SEQ ID NO: 81:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 134 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-128-026-81

Query Match      83.0%; Score 439; DB 4; Length 142;
Best Local Similarity 81.2%; Pred. No. 1.le-47;
Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;

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Db 39 ALAGSCLWSLTPVAELGLGYASEEKVIFRYCAGSCPRGARTQHSLVLARLGRGRAHG 98
   ||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 61 GPCCRPTRYTDVAFDDRRHWQLPQLSAAACGGG 96
   ||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 99 RPCCOPTSYADVTFELDDQHHWQLPQLSAAACGGG 134
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ULT 13
US-08-931-858E-111
; Sequence 111, Application US/08931858E
; Patent No. 6222022
; GENERAL INFORMATION:
; APPLICANT: JOHNSON, EUGENE M
; APPLICANT: MILBRANDT, JEFFREY D
; APPLICANT: KOTZBAUER, PAUL T
; APPLICANT: LAMPE, PATRICIA A
; APPLICANT: KLEIN, ROBERT
; APPLICANT: DESAUVAGE, FRED
; TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTOR
; NUMBER OF SEQUENCES: 239
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: HOWELL & HAFERKAMP, L.C.
; STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
; CITY: ST. LOUIS
; STATE: MO
; COUNTRY: USA
; ZIP: 63105
; COMPUTER READABLE FORM:
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; FILING DATE:
; APPLICATION NUMBER: US/08/931,858E
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: HOLLAND, DONALD R.
; REGISTRATION NUMBER: 35,197
; REFERENCE/DOCKET NUMBER: 971486
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 314-727-5188
; TELEFAX: 314-727-6092
; INFORMATION FOR SEQ ID NO: 111:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 142 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-931-858E-111

Query Match      83.0%; Score 439; DB 3; Length 142;
Best Local Similarity 81.2%; Pred. No. 1.le-47;
Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;

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ULT 14
US-08-981-739-111
; Sequence 111, Application US/08981739
; Patent No. 6232449
; GENERAL INFORMATION:
; APPLICANT: JOHNSON JR., EUGENE M.
; APPLICANT: MILBRANDT, JEFFREY D.
; APPLICANT: KOTZBAUER, PAUL T.
; APPLICANT: LAMPE, PATRICIA A.
; TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS
; NUMBER OF SEQUENCES: 176
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: HOWELL & HAFERKAMP, L.C.
; STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
; CITY: ST. LOUIS
; STATE: MISSOURI
; COUNTRY: US
; ZIP: 63105-1817
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/981,739
; FILING DATE: 31-Aug-1998
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/US97/03461
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: HOLLAND, DONALD R.
; REGISTRATION NUMBER: 35,197
; REFERENCE/DOCKET NUMBER: 976163
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (314) 727-5188
; TELEFAX: (314) 727-6092
; INFORMATION FOR SEQ ID NO: 111:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 142 amino acids
; TYPE: amino acid
; STRANDEDNESS: <Unknown>
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 111:
US-08-981-739-111

Query Match      83.0%; Score 439; DB 3; Length 142;
Best Local Similarity 81.2%; Pred. No. 1.le-47;
Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;

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Db 47 ALAGSCLWSLTPVAELGLGYASEEKVIFRYCAGSCPRGARTQHSLVLARLGRGRAHG 106
   ||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||

QY 61 GPCCRPTRYTDVAFDDRRHWQLPQLSAAACGGG 96
   ||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||
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RESULT 15
US-09-128-026-111
; Sequence 111, Application US/09128026
; Patent No. 6403335
; GENERAL INFORMATION:
; APPLICANT: JOHNSON JR., EUGENE M.
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APPLICANT: MILBRANDT, JEFFREY D.  
APPLICANT: KOTZBAUER, PAUL T.  
APPLICANT: LAMPE, PATRICIA A.  
TITLE OF INVENTION: PERSEPHIN AND RELATED GROWTH FACTORS  
NUMBER OF SEQUENCES: 176  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: HOWELL & HAERKAMP, L.C.  
STREET: 7733 FORSYTH BOULEVARD, SUITE 1400  
CITY: ST. LOUIS  
STATE: MISSOURI  
COUNTRY: US  
ZIP: 63105-1817  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/09/128,026  
FILING DATE:  
CLASSIFICATION:  
ATTORNEY/AGENT INFORMATION:  
NAME: HOLLAND, DONALD R.  
REGISTRATION NUMBER: 35,197  
REFERENCE/DOCKET NUMBER: 976163  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: (314) 727-5188  
TELEFAX: (314) 727-6092  
INFORMATION FOR SEQ ID NO: 111:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 142 amino acids  
TYPE: amino acid  
STRANDEDNESS:  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-09-128-026-111

Query Match 83.0%; Score 439; DB 4; Length 142;  
Best Local Similarity 81.2%; Pred. No. 1.le-47;  
Matches 78; Conservative 8; Mismatches 10; Indels 0; Gaps 0;  
Qy 1 ALSGPCQLWSLTLSVAELGLGVASEKVIERYCAGSCPRGARTOHLALRLQGGRAHG 60  
Db 47 ALAGSCLWSLTLPVAELGLGVASEKVIERYCAGSCPEARTQHSVLRLRGRAGH 106  
Qy 61 GPCCRPTRYTDVAFLLDRHRWQLPQLSAAACGGG 96  
107 RPCCQPTSYADVTFLDDQHHWQLPQLSAAACGGG 142

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Job time : 32 secs

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GenCore version 5.1.6  
Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: September 9, 2003, 22:22:34 ; Search time 29 Seconds  
(without alignments)  
454.522 Million cell updates/sec

Title: US-09-474-980B-221  
Perfect score: 529  
Sequence: 1 ALSGPCQWSLTLSVAELGL.....DRHRWQRLPQLSAAACGGG 96

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Gapop 10.0 , Gapext 0.5

Searched: 513375 seqs, 137303645 residues

al number of hits satisfying chosen parameters: 513375

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Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

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  - 5: /cgn2\_6/ptodata/1/pubpaa/US07\_NEW\_PUB.pep.\*
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  - 10: /cgn2\_6/ptodata/1/pubpaa/US09B\_PUBCOMB.pep.\*
  - 11: /cgn2\_6/ptodata/1/pubpaa/US09C\_PUBCOMB.pep.\*
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  - 13: /cgn2\_6/ptodata/1/pubpaa/US10A\_PUBCOMB.pep.\*
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  - 16: /cgn2\_6/ptodata/1/pubpaa/US10\_NEW\_PUB.pep.\*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
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2	529	100.0	157	10	US-09-813-398-41
3	492	93.0	89	9	US-09-220-920-18
4	322	60.9	183	9	US-09-800-729-101
5	233.5	44.1	113	9	US-09-220-920-34
6	233.5	44.1	116	9	US-09-220-920-35
7	233.5	44.1	144	9	US-09-220-920-36
8	233.5	44.1	144	9	US-09-220-920-41
9	233.5	44.1	185	9	US-09-220-920-42
10	233.5	44.1	200	9	US-09-804-615-2
11	233.5	44.1	224	9	US-09-220-920-29
12	231.5	43.8	96	9	US-09-804-615-16
13	231.5	43.0	224	9	US-09-220-920-33
14	225.5	42.6	113	9	US-09-804-615-34
15	225.5	42.6	113	9	US-09-220-920-3
					Sequence 12, Appl

16	225.5	42.6	114	9	US-09-804-615-37
17	225.5	42.6	116	9	US-09-220-920-4
18	225.5	42.6	116	9	US-09-804-615-11
19	225.5	42.6	135	9	US-09-804-615-40
20	225.5	42.6	140	9	US-09-220-920-5
21	225.5	42.6	140	9	US-09-804-615-10
22	225.5	42.6	140	9	US-09-220-920-12
23	225.5	42.6	159	9	US-09-220-920-89
24	225.5	42.6	181	9	US-09-220-920-40
25	225.5	42.6	220	9	US-09-220-920-26
26	225.5	42.6	220	9	US-09-804-615-9
27	225.5	42.6	220	14	US-10-001-054-56
28	225.5	42.6	220	15	US-10-223-085-318
29	225.5	42.6	220	15	US-10-223-084-318
30	225.5	42.6	220	15	US-10-223-088-318
31	225.5	42.6	220	15	US-10-223-090-318
32	225.5	42.6	220	15	US-10-223-087-318
33	225.5	42.6	220	15	US-10-223-083-318
34	225.5	42.6	220	15	US-10-223-089-318
35	225.5	42.6	237	9	US-09-220-920-32
36	225.5	42.6	238	10	US-09-813-398-40
37	223.5	42.2	96	9	US-09-220-920-19
38	221.5	41.9	113	9	US-09-804-615-7
39	221.5	41.9	116	9	US-09-804-615-6
40	221.5	41.9	140	9	US-09-804-615-5
41	219.5	41.5	102	9	US-09-220-920-14
42	219.5	41.5	198	10	US-09-813-398-17
43	218.5	41.3	237	9	US-09-804-615-4
44	215.5	40.7	90	9	US-09-220-920-75
45	212.5	40.2	94	9	US-09-220-920-17

ALIGNMENTS

RESULT 1

US-09-220-920-15  
; Sequence 15, Application US/09220920  
; Patent No. US20020002269A1  
; GENERAL INFORMATION:  
; APPLICANT: Milbrandt, Jeffrey D.  
; APPLICANT: Baloh, Robert H.  
; TITLE OF INVENTION: Artemin, A No. US20020002269A1 Neurotrophic Factor  
; FILE REFERENCE: 6029-7996  
; CURRENT APPLICATION NUMBER: US/09/220,920  
; CURRENT FILING DATE: 1998-12-24  
; EARLIER APPLICATION NUMBER: 09/163,283  
; EARLIER FILING DATE: 1998-09-29  
; EARLIER APPLICATION NUMBER: 60/108,148  
; EARLIER FILING DATE: 1998-11-12  
; EARLIER APPLICATION NUMBER: 09/218,698  
; EARLIER FILING DATE: 1998-12-22  
; NUMBER OF SEQ ID NOS: 120  
; SOFTWARE: PatentIn Ver. 2.0  
; SEQ ID NO 15  
; LENGTH: 96  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-220-920-15

Query Match 100.0%; Score 529; DB 9; Length 96;  
Best Local Similarity 100.0%; Pred. No. 2.3e-46;  
Matches 96; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY	1	ALSGPCQWSLTLSVAELGLGVASEEKVIFRYCAGSCPRGARTQHLARLQGGRAH 60
Db	1	ALSGPCQWSLTLSVAELGLGVASEEKVIFRYCAGSCPRGARTQHLARLQGGRAH 60
QY	61	GPCRPTRYTDVAFLLDRHRWQRLPQLSAAACGGG 96
Db	61	GPCRPTRYTDVAFLLDRHRWQRLPQLSAAACGGG 96

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RESULT 2
US-09-813-398-41
; Sequence 41, Application US/09813398
; Patent No. US2002016929A1
; GENERAL INFORMATION:
; APPLICANT: Bruce D. Weintraub
; APPLICANT: Mariusz W. Szkludinski
; APPLICANT: University of Maryland
; TITLE OF INVENTION: CYSTINE KNOT GROWTH FACTOR MUTANTS
; FILE REFERENCE: US/09813398
; CURRENT APPLICATION NUMBER: US/09/813,398
; CURRENT FILING DATE: 2001-03-20
; PRIOR APPLICATION NUMBER: PCT/US99/05908
; PRIOR FILING DATE: 1999-03-19
; PRIOR APPLICATION NUMBER: PCT/US98/19772
; PRIOR FILING DATE: 1998-09-22
; NUMBER OF SEQ ID NOS: 41
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 41
; LENGTH: 157
; TYPE: PRT
; ORGANISM: HOMO SAPIEN
09-813-398-41

Query Match          100.0%; Score 529; DB 10; Length 157;
Best Local Similarity 100.0%; Pred. No. 3.8e-46;
Matches 96; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 ALSGPCQLWSLTLVAELGLGYASEEKVIFRYCAGSCPRGARTQHG LALARLQGGRAHG 60
|||||
Db 62 ALSGPCQLWSLTLVAELGLGYASEEKVIFRYCAGSCPRGARTQHG LALARLQGGRAHG 121
|||||

QY 61 GPCCRTRYTDVAFDDRRHWRQLPQLSAAACGCGG 96
|||||
Db 122 GPCCRTRYTDVAFDDRRHWRQLPQLSAAACGCGG 157
|||||

RESULT 3
US-09-220-920-18
; Sequence 18, Application US/09220920
; Patent No. US20020002269A1
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; APPLICANT: Baloh, Robert H.
; TITLE OF INVENTION: Artemin, A No. US20020002269A1el Neurotrophic Factor
; FILE REFERENCE: 6029-7996
; CURRENT APPLICATION NUMBER: US/09/220,920
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 18
; LENGTH: 89
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-920-18

Query Match          93.0%; Score 492; DB 9; Length 89;
Best Local Similarity 100.0%; Pred. No. 1.2e-42;
Matches 89; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 6 CQLWSLTLVAELGLGYASEEKVIFRYCAGSCPRGARTQHG LALARLQGGRAHG 65
|||||
Db 1 CQLWSLTLVAELGLGYASEEKVIFRYCAGSCPRGARTQHG LALARLQGGRAHG 60
|||||

QY 66 PRTYTDVAFDDRRHWRQLPQLSAAACG 94
|||||
Db 61 PRTYTDVAFDDRRHWRQLPQLSAAACG 89
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RESULT 4
US-09-800-729-101
; Sequence 101, Application US/09800729
; Patent No. US20020068319A1
; GENERAL INFORMATION:
; APPLICANT: Ni et al.
; TITLE OF INVENTION: 32 Human secreted proteins
; FILE REFERENCE: P2044P1
; CURRENT APPLICATION NUMBER: US/09/800,729
; CURRENT FILING DATE: 2001-03-08
; PRIOR APPLICATION NUMBER: PCT/US00/26013
; PRIOR FILING DATE: 2000-09-22
; PRIOR APPLICATION NUMBER: 60/155,709
; PRIOR FILING DATE: 1999-09-24
; NUMBER OF SEQ ID NOS: 217
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 101
; LENGTH: 183
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: SITE
; LOCATION: (86)
; OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
; NAME/KEY: SITE
; LOCATION: (146)
; OTHER INFORMATION: Xaa equals any of the naturally occurring L-amino acids
US-09-800-729-101

Query Match          60.9%; Score 322; DB 9; Length 183;
Best Local Similarity 65.7%; Pred. No. 3.8e-25;
Matches 65; Conservative 2; Mismatches 22; Indels 10; Gaps 3;

QY 5 PCQLWSL-----TLVAELGLGYASEEKVIFRYCAGSCPRGARTQHG LALARLQGG 57
|||||
Db 88 PSFVMSMPAEPDPVGRAPRPGRLIGE--VIFRYCAGSCPRGARTQHG LALARLQGG 145
|||||

QY 58 AHGPGCCRPTRYTDVAFDDRRHWRQLPQLSAAACGCGG 96
|||||
Db 146 XHGGPCCRTRYTDVAFDDRRHAGSGCPS-SRRLCGCGG 183
|||||

RESULT 5
US-09-220-920-34
; Sequence 34, Application US/09220920
; Patent No. US20020002269A1
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; APPLICANT: Baloh, Robert H.
; TITLE OF INVENTION: Artemin, A No. US20020002269A1el Neurotrophic Factor
; FILE REFERENCE: 6029-7996
; CURRENT APPLICATION NUMBER: US/09/220,920
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 34
; LENGTH: 113
; TYPE: PRT
; ORGANISM: MURINE
US-09-220-920-34

Query Match          44.1%; Score 233.5; DB 9; Length 113;
Best Local Similarity 48.5%; Pred. No. 2.1e-16;
Matches 48; Conservative 15; Mismatches 27; Indels 9; Gaps 2;
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; PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
; PRIOR FILING DATE: 1999-07-02
; NUMBER OF SEQ ID NOS: 40
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 200
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-804-615-2

Query Match      44.1%; Score 233.5; DB 9; Length 200;
Best Local Similarity 49.5%; Pred. No. 3.7e-16;
Matches 49; Conservative 12; Mismatches 29; Indels 9; Gaps 2;

QY      6 COLMSLTLSVAELGLGYASEEKVIFRYCAGCPRGARTQHGLALARLQGG-----R 57
Db      103 CRLRSQVLPVSAALGLGHSDELIRFRCTGSCPR-ARSPHDLASLLGAGALRPPGSR 161
QY      58 AHGGPCCRPTRYTDVAFLLDRHRWQRLPOLSAACGCGG 96
      162 PVSQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 200

RESULT 10
US-09-220-920-29
; Sequence 29, Application US/09220920
; Patent No. US20020002269A1
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; TITLE OF INVENTION: Artemin, A No. US20020002269A1el Neurotrophic Factor
; APPLICANT: Baloh, Robert H.
; FILE REFERENCE: 6029-7996
; CURRENT APPLICATION NUMBER: US/09/220,920
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
; LENGTH: 224
; TYPE: PRT
; ORGANISM: MURINE
US-09-220-920-29

Query Match      44.1%; Score 233.5; DB 9; Length 224;
Best Local Similarity 48.5%; Pred. No. 4.1e-16;
Matches 48; Conservative 15; Mismatches 27; Indels 9; Gaps 2;

QY      6 COLMSLTLSVAELGLGYASEEKVIFRYCAGCPRGARTQHGLALARLQGG-----R 57
Db      127 CRLRSQVLPVSAALGLGHSDELIRFRFCGSC-RRARSQHDLSLASLLGAGALRSPGSR 185
QY      58 AHGGPCCRPTRYTDVAFLLDRHRWQRLPOLSAACGCGG 96
      186 PISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224

RESULT 11
US-09-804-615-16
; Sequence 16, Application US/09804615
; Patent No. US20020055467A1
; GENERAL INFORMATION:
; APPLICANT: Johansen, Teit E.
; APPLICANT: Wen-Yee Saw, Dinah
; TITLE OF INVENTION: No. US20020055467A1el Neurotrophic Factors
; FILE REFERENCE: No. US20020055467A1el Neurotrophic Factors
; CURRENT APPLICATION NUMBER: US/09/804,615
; CURRENT FILING DATE: 2001-03-12
; PRIOR APPLICATION NUMBER: DANISH 1998 00904
```

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; PRIOR FILING DATE: 1998-07-06
; PRIOR APPLICATION NUMBER: USSN 60/092,229
; PRIOR FILING DATE: 1998-07-09
; PRIOR APPLICATION NUMBER: DANISH 1998 01048
; PRIOR FILING DATE: 1998-08-19
; PRIOR APPLICATION NUMBER: USSN 60/097,774
; PRIOR FILING DATE: 1998-08-25
; PRIOR APPLICATION NUMBER: USSN 60/103,908
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: DANISH 1998 01265
; PRIOR FILING DATE: 1998-10-06
; PRIOR APPLICATION NUMBER: O.S.S.N 09/347,613
; PRIOR FILING DATE: 1999-07-02
; NUMBER OF SEQ ID NOS: 40
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 16
; LENGTH: 224
; TYPE: PRT
; ORGANISM: Murinae gen. sp.
US-09-804-615-16

Query Match      44.1%; Score 233.5; DB 9; Length 224;
Best Local Similarity 48.5%; Pred. No. 4.1e-16;
Matches 48; Conservative 15; Mismatches 27; Indels 9; Gaps 2;

QY      6 COLMSLTLSVAELGLGYASEEKVIFRYCAGCPRGARTQHGLALARLQGG-----R 57
Db      127 CRLRSQVLPVSAALGLGHSDELIRFRFCGSC-RRARSQHDLSLASLLGAGALRSPGSR 185
QY      58 AHGGPCCRPTRYTDVAFLLDRHRWQRLPOLSAACGCGG 96
      186 PISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224

RESULT 12
US-09-220-920-33
; Sequence 33, Application US/09220920
; Patent No. US20020002269A1
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; APPLICANT: Baloh, Robert H.
; TITLE OF INVENTION: Artemin, A No. US20020002269A1el Neurotrophic Factor
; FILE REFERENCE: 6029-7996
; CURRENT APPLICATION NUMBER: US/09/220,920
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 33
; LENGTH: 96
; TYPE: PRT
; ORGANISM: MURINE
US-09-220-920-33

Query Match      43.8%; Score 231.5; DB 9; Length 96;
Best Local Similarity 48.5%; Pred. No. 2.8e-16;
Matches 47; Conservative 15; Mismatches 26; Indels 9; Gaps 2;

QY      6 COLMSLTLSVAELGLGYASEEKVIFRYCAGCPRGARTQHGLALARLQGG-----R 57
Db      1 CRLRSQVLPVSAALGLGHSDELIRFRFCGSC-RRARSQHDLSLASLLGAGALRSPGSR 59
QY      58 AHGGPCCRPTRYTDVAFLLDRHRWQRLPOLSAACGCG 94
      60 PISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCG 96

RESULT 13
```

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US-09-804-615-34
; Sequence 34, Application US/09804615
; Patent No. US20020055467A1
; GENERAL INFORMATION:
; APPLICANT: Johansen, Teit E.
; TITLE OF INVENTION: No. US20020055467A1el Neurotrophic Factors
; FILE REFERENCE: No. US20020055467A1el Neurotrophic Factors
; CURRENT APPLICATION NUMBER: US/09/804,615
; CURRENT FILING DATE: 2001-03-12
; PRIOR APPLICATION NUMBER: DANISH 1998 00904
; PRIOR FILING DATE: 1998-07-06
; PRIOR APPLICATION NUMBER: USSN 60/092,229
; PRIOR FILING DATE: 1998-07-09
; PRIOR APPLICATION NUMBER: DANISH 1998 01048
; PRIOR FILING DATE: 1998-08-19
; PRIOR APPLICATION NUMBER: USSN 60/097,774
; PRIOR FILING DATE: 1998-08-25
; PRIOR APPLICATION NUMBER: USSN 60/103,908
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: DANISH 1998 01265
; PRIOR FILING DATE: 1998-10-06
; PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
; PRIOR FILING DATE: 1999-07-02
; NUMBER OF SEQ ID NOS: 40
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 34
; LENGTH: 224
; TYPE: PRT
; ORGANISM: Rattus sp.
US-09-804-615-34

Query Match      43.0%; Score 227.5; DB 9; Length 224;
Best Local Similarity 47.5%; Pred. No. 1.7e-15;
Matches 47; Conservative 15; Mismatches 28; Indels 9; Gaps 2;

QY      6 COLWSLTLVSAELGLGYASEEKVIFRYCAGSCPRGARTOHGLARLQOG-----R 57
Db      127 CLRSQLVPVRAIGLGHRSDELIRFCGSC-RRARSPHDLASLLGAGALRPPGSR 185
QY      58 AHGGPCCRPTRYTVDVAFDDRHWQRLPOLSAACGCGG 96
Db      186 PISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224

US-09-220-920-3
; Sequence 3, Application US/09220920
; Patent No. US2002002269A1
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; TITLE OF INVENTION: Artemin, A No. US2002002269A1el Neurotrophic Factor
; FILE REFERENCE: 6029-7996
; CURRENT APPLICATION NUMBER: US/09/220,920
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-920-3

Query Match      42.6%; Score 225.5; DB 9; Length 113;
Best Local Similarity 48.5%; Pred. No. 1.3e-15;
Matches 48; Conservative 13; Mismatches 29; Indels 9; Gaps 2;

QY      6 COLWSLTLVSAELGLGYASEEKVIFRYCAGSCPRGARTOHGLARLQOG-----R 57
Db      16 CLRSQLVPVRAIGLGHRSDELIRFCGSC-RRARSPHDLASLLGAGALRPPGSR 74
QY      58 AHGGPCCRPTRYTVDVAFDDRHWQRLPOLSAACGCGG 96
Db      75 PVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113

US-09-804-615-12
; Sequence 12, Application US/09804615
; Patent No. US20020055467A1
; GENERAL INFORMATION:
; APPLICANT: Johansen, Teit E.
; TITLE OF INVENTION: No. US20020055467A1el Neurotrophic Factors
; FILE REFERENCE: No. US20020055467A1el Neurotrophic Factors
; CURRENT APPLICATION NUMBER: US/09/804,615
; CURRENT FILING DATE: 2001-03-12
; PRIOR APPLICATION NUMBER: DANISH 1998 00904
; PRIOR FILING DATE: 1998-07-06
; PRIOR APPLICATION NUMBER: USSN 60/092,229
; PRIOR FILING DATE: 1998-07-09
; PRIOR APPLICATION NUMBER: DANISH 1998 01048
; PRIOR FILING DATE: 1998-08-19
; PRIOR APPLICATION NUMBER: USSN 60/097,774
; PRIOR FILING DATE: 1998-08-25
; PRIOR APPLICATION NUMBER: USSN 60/103,908
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: DANISH 1998 01265
; PRIOR FILING DATE: 1998-10-06
; PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
; PRIOR FILING DATE: 1999-07-02
; NUMBER OF SEQ ID NOS: 40
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-804-615-12

Query Match      42.6%; Score 225.5; DB 9; Length 113;
Best Local Similarity 48.5%; Pred. No. 1.3e-15;
Matches 48; Conservative 13; Mismatches 29; Indels 9; Gaps 2;

QY      6 COLWSLTLVSAELGLGYASEEKVIFRYCAGSCPRGARTOHGLARLQOG-----R 57
Db      16 CLRSQLVPVRAIGLGHRSDELIRFCGSC-RRARSPHDLASLLGAGALRPPGSR 74
QY      58 AHGGPCCRPTRYTVDVAFDDRHWQRLPOLSAACGCGG 96
Db      75 PVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113

Search completed: September 9, 2003, 22:26:56
Job time : 32 secs
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L1 208 PERSEPHIN

=> s l1 (20a) antibod###

L2 12 L1 (20A) ANTIBOD###

=> duplicate remove

ENTER L# LIST OR (END):12

DUPLICATE PREFERENCE IS 'USPATFULL, PCTFULL'

KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L2

L3 12 DUPLICATE REMOVE L2 (0 DUPLICATES REMOVED)

=> d 1-12

L3 ANSWER 1 OF 12 USPATFULL on STN

AN 2002:213408 USPATFULL

TI Methods of increasing distribution of therapeutic agents

IN Bankiewicz, Krysz, Piedmont, CA, UNITED STATES

Hamilton, John, Washington, DC, UNITED STATES

Oldfield, Edward, Philomont, VA, UNITED STATES

Phillips, Heidi, Palo Alto, CA, UNITED STATES

PI US 2002114780 A1 20020822

AI US 2001-999203 A1 20011130 (9)

PRAI US 2000-250286P 20001130 (60)

DT Utility

FS APPLICATION

LN.CNT 942

INCL INCLM: 424/085.100

INCLS: 514/056.000

NCL NCLM: 424/085.100

NCLS: 514/056.000

IC [7]

ICM: A61K038-19

ICS: A61K031-727

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 2 OF 12 USPATFULL on STN

AN 2002:4289 USPATFULL

TI ARTEMIN, A NEUROTROPHIC FACTOR

IN MILBRANDT, JEFFREY D., ST LOUIS, MO, UNITED STATES

BALOH, ROBERT H., ST LOUIS, MO, UNITED STATES

PI US 2002002269 A1 20020103

AI US 1998-220920 A1 19981224 (9)

RLI Division of Ser. No. US 1998-218698, filed on 22 Dec 1998, PENDING

Continuation-in-part of Ser. No. US 1998-163283, filed on 29 Sep 1998,

ABANDONED

PRAI US 1998-108148P 19981112 (60)

DT Utility

FS APPLICATION

LN.CNT 2669

INCL INCLM: 530/351.000

INCLS: 530/839.000; 530/324.000; 536/023.510; 514/012.000; 435/320.100;

435/325.000; 514/044.000; 530/387.900; 530/388.240; 435/007.100;

435/006.000

NCL NCLM: 530/351.000

NCLS: 530/839.000; 530/324.000; 536/023.510; 514/012.000; 435/320.100;

435/325.000; 514/044.000; 530/387.900; 530/388.240; 435/007.100;

435/006.000

IC [7]

ICM: C12Q001-68

ICS: G01N033-53; A61K038-00; C07H021-04; A61K031-70; A01N043-04;

A61K045-00; C12N015-00; C12N015-09; C12N015-63

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 3 OF 12 USPATFULL on STN

AN 2002:136782 USPATFULL

TI Polynucleotides encoding persephin and related growth factors

IN Johnson, Jr., Eugene M., St. Louis, MO, United States

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Milbrandt, Jeffrey D., St. Louis, MO, United States  
Kotzbauer, Paul T., Swarthmore, PA, United States  
Lampe, Patricia A., St. Louis, MO, United States  
PA Washington University, St. Louis, MO, United States (U.S. corporation)  
PI US 6403335 B1 20020611  
AI US 1998-128026 19980731 (9)  
RLI Division of Ser. No. US 981739, now patented, Pat. No. US 6232449  
Continuation-in-part of Ser. No. US 1996-615944, filed on 14 Mar 1996,  
now abandoned  
DT Utility  
FS GRANTED  
LN.CNT 3796  
INCL INCLM: 435/069.400  
INCLS: 435/320.000; 435/325.000; 435/252.300; 536/023.510  
NCL NCLM: 435/069.400  
NCLS: 435/252.300; 435/320.100; 435/325.000; 536/023.510  
IC [7]  
ICM: C12N015-18  
ICS: C12N015-85; C12N015-63  
EXF 536/23.51; 435/69.4; 435/320.1; 435/325; 435/252.3  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 4 OF 12 USPATFULL on STN  
AN 2001:147751 USPATFULL  
TI Artemin, a novel neurotrophic factor  
IN Milbrandt, Jeffrey D., St. Louis, MO, United States  
Baloh, Robert H., St. Louis, MO, United States  
PA Washington University, St. Louis, MO, United States (U.S. corporation)  
PI US 6284540 B1 20010904  
AI US 1998-220528 19981224 (9)  
RLI Division of Ser. No. US 1998-218698, filed on 22 Dec 1998  
Continuation-in-part of Ser. No. US 1998-163283, filed on 29 Sep 1998  
PRAI US 1998-108148P 19981112 (60)  
DT Utility  
FS GRANTED  
LN.CNT 2590  
INCL INCLM: 435/455.000  
INCLS: 435/320.100; 435/325.000; 435/366.000; 435/368.000; 435/383.000;  
435/384.000; 536/023.500  
NCL NCLM: 435/455.000  
NCLS: 435/320.100; 435/325.000; 435/366.000; 435/368.000; 435/383.000;  
435/384.000; 536/023.500  
IC [7]  
ICM: C12N005-00  
ICS: C12N005-08; C12N015-63; C12N015-85; C07H021-04  
EXF 530/350; 514/44; 435/4; 435/320.1; 435/5; 435/29; 536/23.5  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 5 OF 12 USPATFULL on STN  
AN 2001:71683 USPATFULL  
TI Persephin and related growth factors  
IN Johnson, Jr., Eugene M., St. Louis, MO, United States  
Milbrandt, Jeffrey D., St. Louis, MO, United States  
Kotzbauer, Paul T., Swarthmore, PA, United States  
Lampe, Patricia A., St. Louis, MO, United States  
PA Washington University, St. Louis, MO, United States (U.S. corporation)  
PI US 6232449 B1 20010515  
WO 9733911 19970918  
AI US 1998-981739 19980831 (8)  
WO 1997-US3461 19970314  
19980831 PCT 371 date  
19980831 PCT 102(e) date  
RLI Continuation-in-part of Ser. No. US 1996-615944, filed on 14 Mar 1996,  
now abandoned  
DT Utility  
FS Granted  
LN.CNT 3790  
INCL INCLM: 530/399.000  
INCLS: 530/350.000

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NCL NCLM: 530/399.000  
NCLS: 530/350.000  
IC [7]  
ICM: C07K014-48  
EXF 530/350; 530/399; 930/20  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 6 OF 12 USPATFULL on STN  
AN 2001:60041 USPATFULL  
TI Persephin and related growth factors  
IN Johnson, Eugene M., St. Louis, MO, United States  
Milbrandt, Jeffrey D., St. Louis, MO, United States  
Kotzbauer, Paul T., Aston, PA, United States  
Lampe, Patricia A., St. Louis, MO, United States  
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PA Washington University, St. Louis, MO, United States (U.S. corporation)  
PI US 6222022 B1 20010424  
AI US 1997-931858 19970916 (8)  
RLI Continuation-in-part of Ser. No. US 1997-881172, filed on 23 Jun 1997,  
now abandoned Continuation-in-part of Ser. No. WO 1997-US3461, filed on  
14 Mar 1997 Continuation-in-part of Ser. No. US 1996-615944, filed on 14  
Mar 1996, now abandoned  
DT Utility  
FS Granted  
LN.CNT 3733  
INCL INCLM: 530/399.000  
INCLS: 530/350.000; 930/120.000  
NCL NCLM: 530/399.000  
NCLS: 530/350.000; 930/120.000  
IC [7]  
ICM: C07K014-475  
EXF 530/350; 530/399; 930/120  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 7 OF 12 PCTFULL COPYRIGHT 2003 Univentio on STN  
AN 2000018799 PCTFULL ED 20020515  
TIEN ARTEMIN, A NOVEL NEUROTROPHIC FACTOR  
TIFR L'ARTEMINE, UN NOUVEAU FACTEUR NEUROTROPHIQUE  
IN MILBRANDT, Jeffrey, D.;  
BALOH, Robert, H.  
PA WASHINGTON UNIVERSITY;  
MILBRANDT, Jeffrey, D.;  
BALOH, Robert, H.  
LA English  
DT Patent  
PI WO 2000018799 A1 20000406  
DS W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM  
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
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SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW GH GM KE  
LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH  
CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI  
CM GA GN GW ML MR NE SN TD TG  
AI WO 1999-US22604 A 19990929  
PRAI US 1998-09/163,283 19980929  
US 1998-60/108,148 19981112  
US 1998-09/218,698 19981222  
ICM C07K014-47  
ICS C07K014-475; C12N005-10; C12N015-12; C12N015-16; C12N015-63;  
C12N015-64; A61K038-16; A61K038-17; A61K038-18; A61K039-395;  
A61K048-00

L3 ANSWER 8 OF 12 PCTFULL COPYRIGHT 2003 Univentio on STN  
AN 2000006731 PCTFULL ED 20020515  
TIEN PERSEPHIN ARF, A PROTEIN ENCODED BY UNSPLICED PERSEPHIN MRNA  
TIFR LA PERSEPHINE ARF, PROTEINE CODEE PAR UN ARNM DE PERSEPHINE SANS  
EPISSURE  
IN JOHNSON, Eugene, M., Jr.;

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MILBRANDT, Jeffrey, D.;  
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 MILBRANDT, Jeffrey, D.;  
 KOTZBAUER, Paul, T.;  
 LAMPE, Patricia, A.;  
 KLEIN, Robert;  
 DE SAUVAGE, Fred  
 LA English  
 DT Patent  
 PI WO 2000006731 A2 20000210  
 DS W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
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 SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK  
 ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN  
 GW ML MR NE SN TD TG  
 AI WO 1999-US17277 A 19990730  
 PRAI US 1998-09/126,799 19980731  
 ICM C12N015-12  
 ICS C12N015-11; C07K014-475; C07K016-22; C12Q001-68; G01N033-53  
 L3 ANSWER 9 OF 12 PCTFULL COPYRIGHT 2003 Univentio on STN  
 AN 1999049039 PCTFULL ED 20020515  
 TIEN GFR&alpha;3 AND ITS USES  
 TIFR LE GFR&alpha;3 ET SES UTILISATIONS  
 IN DE SAUVAGE, Frederic, J.;  
 KLEIN, Robert, D.;  
 PHILLIPS, Heidi, S.;  
 ROSENTHAL, Arnon  
 PA GENENTECH, INC.  
 LA English  
 DT Patent  
 PI WO 9949039 A2 19990930  
 DS W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
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 LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG  
 SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW GH GM KE LS MW SD  
 SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES  
 FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW  
 ML MR NE SN TD TG  
 AI WO 1999-US6098 A 19990319  
 PRAI US 1998-60/079,124 19980323  
 US 1998-60/081,569 19980413  
 ICM C12N015-12  
 ICS C07K014-71; C12N015-85; C12N015-70; C12N015-81; C12N001-19;  
 C12N005-10; C12N001-21; C07K019-00; C07K016-28; G01N033-68;  
 C12Q001-42; A61K039-395  
 L3 ANSWER 10 OF 12 PCTFULL COPYRIGHT 2003 Univentio on STN  
 AN 1999014235 PCTFULL ED 20020515  
 TIEN PERSEPHIN AND RELATED GROWTH FACTORS  
 TIFR PERSEPHINE ET FACTEURS DE CROISSANCE ASSOCIES  
 IN JOHNSON, Eugene, M.;  
 MILBRANDT, Jeffrey, D.;  
 KOTZBAUER, Paul, T.;  
 LAMPE, Patricia, A.;  
 KLEIN, Robert;  
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 PA WASHINGTON UNIVERSITY;  
 JOHNSON, Eugene, M.;  
 MILBRANDT, Jeffrey, D.;  
 KOTZBAUER, Paul, T.;

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LAMPE, Patricia, A.;  
 KLEIN, Robert;  
 DeSAUVAGE, Fred  
 LA English  
 DT Patent  
 PI WO 9914235 A1 19990325  
 DS W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI  
 GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT  
 LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL  
 TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW  
 AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR  
 IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN  
 TD TG

AI WO 1998-US19163 A 19980915  
 PRAI US 1997-08/931,858 19970916  
 ICM C07K014-475  
 ICS C07K016-26; C12N015-18; C12N015-85; C12N015-63; C07H021-00;  
 A61K038-18; A61K048-00; C12Q001-68; G01N033-53; C12P019-34

L3 ANSWER 11 OF 12 PCTFULL COPYRIGHT 2003 Univentio on STN  
 AN 1998046622 PCTFULL ED 20020514  
 TIEN RECEPTORS FOR TGF- $\beta$ ; -RELATED NEUROTROPHIC FACTORS  
 TIFR RECEPTEURS DES FACTEURS NEUROTROPHIQUES ASSOCIES AU TGF- $\beta$ ;  
 IN MILBRANDT, Jeffrey, D.;  
 JOHNSON, Eugene, M., Jr.;  
 BALOH, Robert, H.  
 PA WASHINGTON UNIVERSITY;  
 MILBRANDT, Jeffrey, D.;  
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 BALOH, Robert, H.  
 LA English  
 DT Patent  
 PI WO 9846622 A1 19981022  
 DS W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI  
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 LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL  
 TJ TM TR TT UA UG US US UZ VN YU ZW GH GM KE LS MW SD SZ UG  
 ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB  
 GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN  
 TD TG

AI WO 1998-US7996 A 19980416  
 PRAI US 1997-60/044,007 19970417  
 US 1997-08/859,988 19970521  
 ICM C07K001-00  
 ICS C07K014-00; C07K016-00; C07K017-00; A61K038-24; A61K038-27;  
 A23J001-00; C12P021-06; C12N005-00; C12N015-00; G01N033-00

L3 ANSWER 12 OF 12 PCTFULL COPYRIGHT 2003 Univentio on STN  
 AN 1997033911 PCTFULL ED 20020514  
 TIEN PERSEPHIN AND RELATED GROWTH FACTORS  
 TIFR PERSEPHINE ET FACTEURS DE CROISSANCE ASSOCIES  
 IN JOHNSON, Eugene, M., Jr.;  
 MILBRANDT, Jeffrey, D.;  
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 LAMPE, Patricia, A.  
 PA WASHINGTON UNIVERSITY;  
 JOHNSON, Eugene, M., Jr.;  
 MILBRANDT, Jeffrey, D.;  
 KOTZBAUER, Paul, T.;  
 LAMPE, Patricia, A.  
 LA English  
 DT Patent  
 PI WO 9733911 A1 19970918  
 DS W: AL AM AT AU AZ BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB  
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 MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US  
 UZ VN YU GH KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT  
 BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG  
 CI CM GA GN ML MR NE SN TD TG

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PRAI US 1996-8/615,944 19960314  
ICM C07K014-475  
ICS C07K016-26; C12N015-18; C12N015-85; C12N015-63; C12N001-21;  
C07H021-00; A61K038-18; A61K048-00; C12Q001-68; G01N033-53;  
C12P019-34

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